

MANUFACTURERS' RECORD

A Weekly

Southern Industrial and Hardware

Newspaper.

VOL. XI. No. 11. {
WEEKLY.

BALTIMORE, APRIL 23, 1887.

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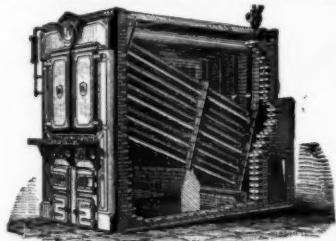
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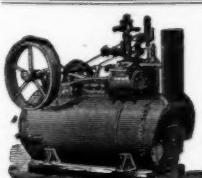
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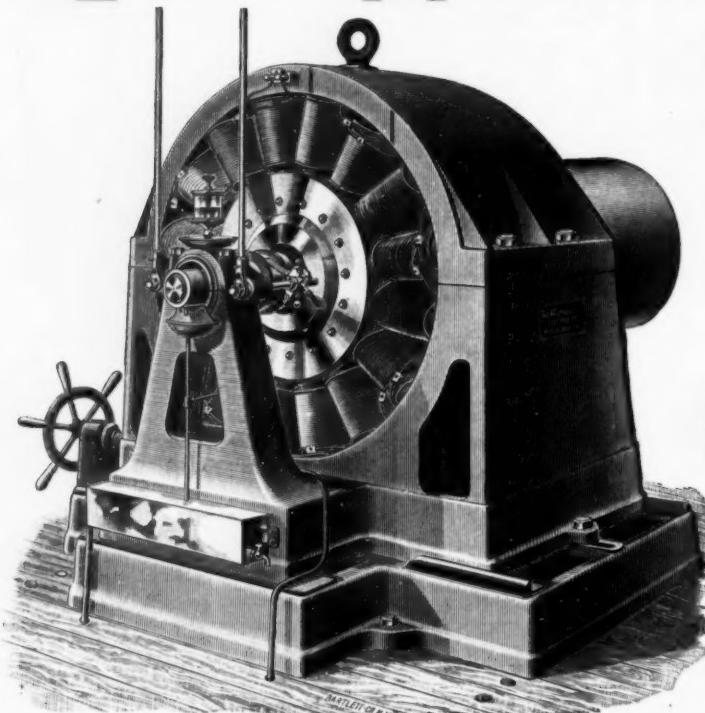
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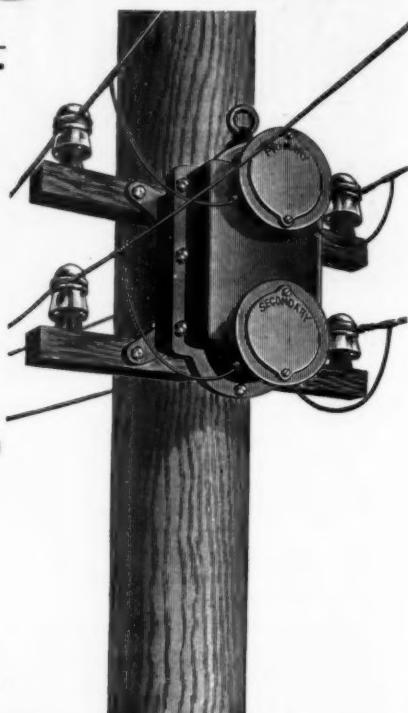
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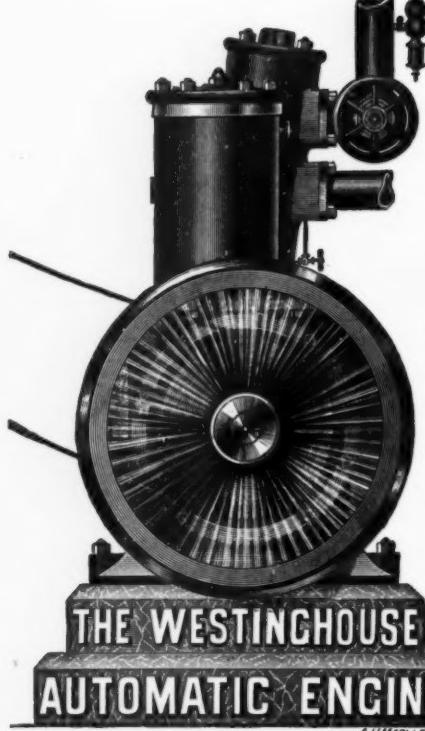
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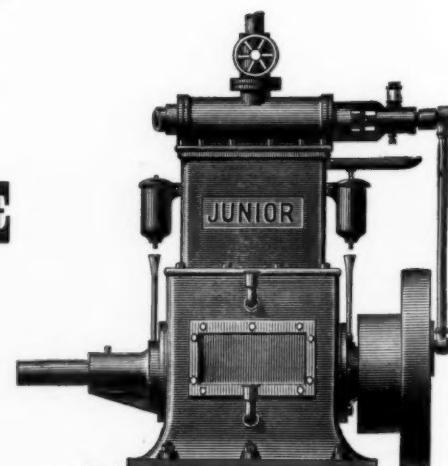
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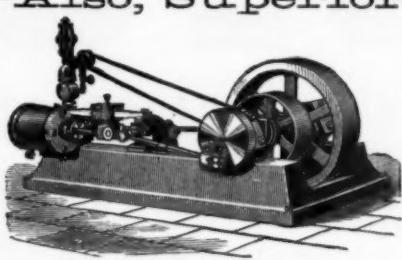
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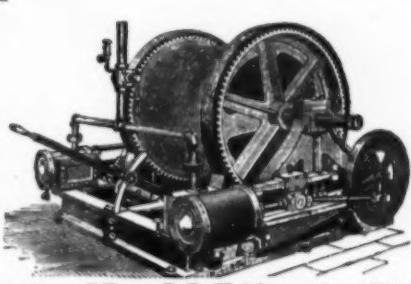
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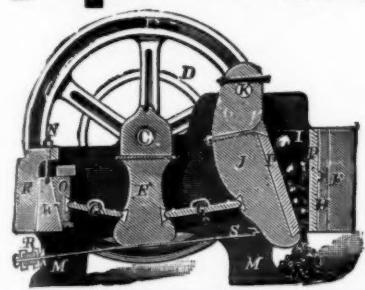
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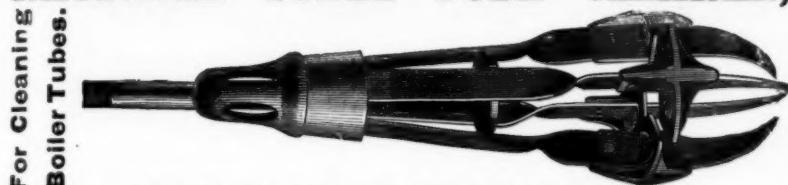
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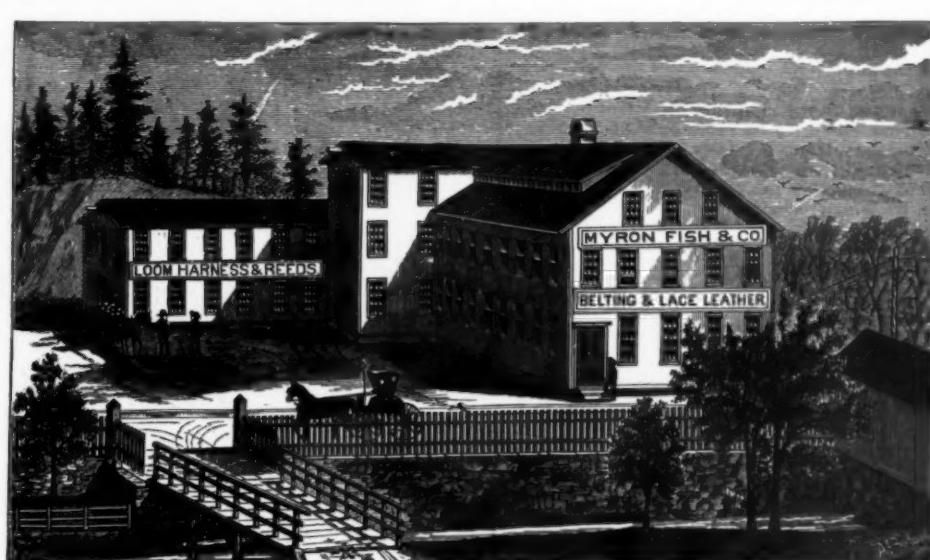
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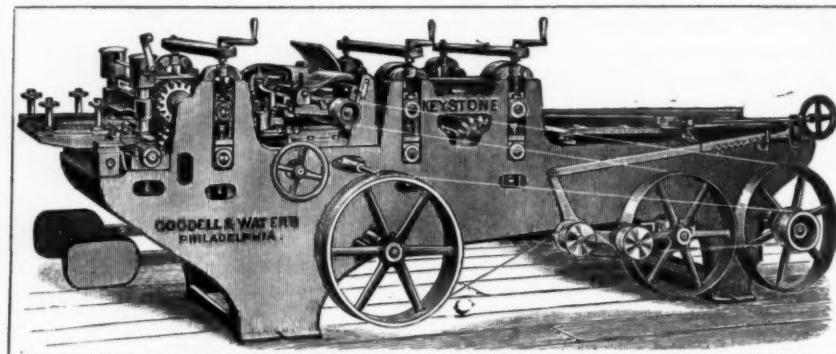
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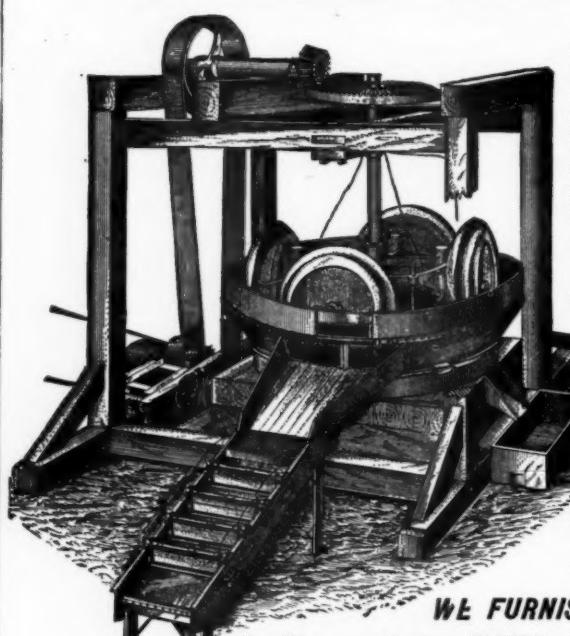
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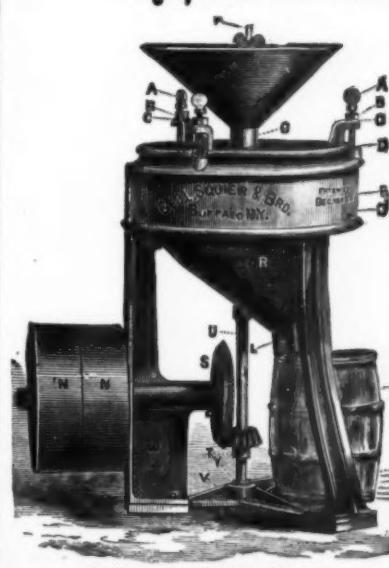
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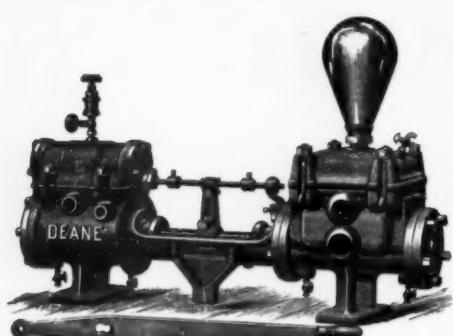
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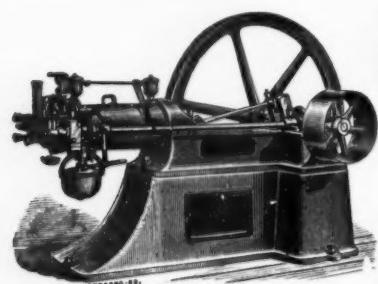
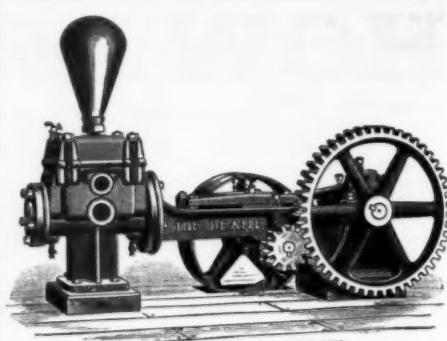


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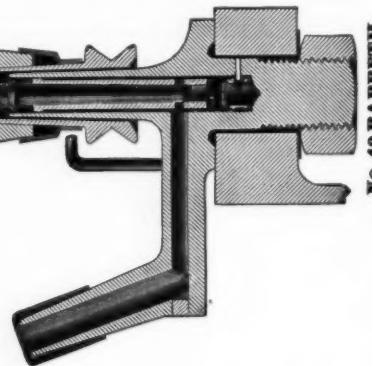
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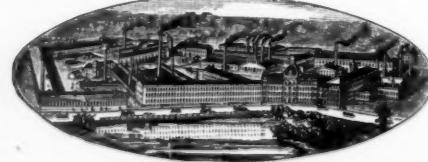
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BALTIMORE, APRIL 23, 1887.

The Interstate Abortion.

The decision of Judge Deady, of Oregon, setting aside the interstate commerce law in favor of the Oregon & California Railroad Co. is an early and staggering blow to that abortion.

The learned judge has, during his six years of service on the bench, been noted for the clearness and correctness of his decisions, which have seldom, if ever, been reversed by higher courts. This railroad company had been charging less rates for freights destined for parts outside the State than for local freight. The judge decided that it had clearly a legal right to continue to do so. It is a State, not an interstate road, therefore—to comply with the law—it must bill through to the terminal point on its own line, and then furnish another bill to cover the transportation (in this case by water), that is, not under its own management. In other words, freight put aboard a railroad in any State for delivery in some other must have as many bills as there are States through which it will pass, and whatever companies carry it can charge lower rates for such freights—if they see fit—than for local business, and the law cannot interfere. It is not astonishing that the interstate commissions were troubled (as the Washington dispatches put it) when they heard of that decision. We have never believed that the law would stand judicial scrutiny, but we had not expected that its futility would be demonstrated at so early a day. For the good of general business the sooner it is declared inoperative and a dead-letter by the commissioners the better. The amount of damage already wrought is beyond estimate. Complaints of the injuries consequent upon its passage are heard everywhere and in daily increasing volume. Among these are many from manufacturers who have at great cost of time and money built up a foreign trade. Some years since numbers of American manufacturers sent extensive exhibits to an exposition in Australasia, and followed up the lead thus obtained by an expensive canvas of the several English colonies of that remote region. Their enterprise paid handsomely, for new and extensive markets were opened, not only for their goods

but for many others of American manufacture. Most of these exports were shipped by rail across the continent to San Francisco, and from thence went by the steamship lines that ply regularly between that and Australasian ports. Our manufacturers were actually competing with and beating those of Great Britain in some of her wealthiest and most prosperous colonial possessions. An extensive opening had been made for American-made goods, and the lines of demand were broadening every month. The chief popular cry of the free-traders—"a foreign market for our surplus wares"—was in a fair way to be fully answered through the exertions of men of force and enterprise, when suddenly the interstate commerce law is interposed, and if the interpretation put upon it by the railroads is correct, there is great danger that this desirable trade that has been secured at great cost will be lost.

How the law effects this injury is lucidly stated by Mr. L. W. Coe, president of the Coe Brass Manufacturing Co., of Torrington, Conn. That gentleman says: "We are shipping freight to New Zealand via rail to San Francisco and steamer from there. The rate charged from New York to San Francisco prior to the law going into effect was \$1.95 per 100 pounds. We are now informed that the charge will be \$4.65 per 100 pounds, which will prevent our sending any freight, except by sailing vessel direct from New York. The time by that conveyance will be so great that we shall probably lose that trade." A law that compels a manufacturer to pay over a hundred per cent. more for transporting his wares than he did when he gave prices to his customers is unjust and oppressive, and contrary to the spirit of American institutions. It is particularly unfortunate that it should have been enacted at a time when in a dozen Southern States new and vast manufacturing enterprises are entering the lists as competitors with others long established for their share of domestic and foreign trade. There is one way in which to save the country from the disastrous operation of this law. Let the commissioners, guided by the decision of Judge Deady, exercise the discretion the law permits, and, using their own action in the case of the Southern railways as a precedent, suspend the operations of the law until Congress shall have assembled and either amended or abolished it. Such action by the commission would relieve the business of the country of the uncertainties that now hamper it, and our manufacturers would escape the perils that threaten to destroy their foreign trade.

A NEW national bank with a capital of \$100,000 has been organized in Anniston, and still more important a dime savings bank, with a capital of \$30,000, has been formed. There ought to be a savings bank in every city in the South, and Anniston has done well in establishing one.

Newspapers and Hotels Essential to a Town's Prosperity.

There is great need throughout the South, and especially in the growing towns to which many visitors are flocking, of good hotels. To be compelled to spend a few days at some of the so-called hotels, even in prosperous places, is enough to keep away many who would visit these towns. Some days ago a prominent Baltimore capitalist, who contemplated a trip South with a view to making investments, was discussing this matter. "I could put up," said he, "with some of these hotel drawbacks myself, but I want to take my family along and I want to know where the best hotels are to be found. I know from experience what the majority of Southern hotels are and I am not willing to take my people to them." This gentleman was a representative of a very large class. People who have been accustomed to the best Northern hotels look with dread upon the idea of traveling in the South because of the lack of hotel accommodations. The building of good hotels and the running of them in the very best manner, will do more to advertise a town than any other enterprise, except a first-class newspaper. The newspaper is probably first in advertising a town, and when a good paper is supplemented by a good hotel that town has two agencies that day and night, week days and Sundays, are steadily advertising it to the world.

The traveling man tells his friends of the first-class hotel that he will find there and thus every guest becomes an advertising agent for the hotel and the town. The newspaper is everywhere regarded as typical of the place in which it is published. If the local papers of any town are enterprising, well managed, and giving good evidence of prosperous times in their advertising columns, then every copy of these papers that is published becomes an advertisement of the place.

There are some points in the South where these facts are appreciated, and the lessons that these places teach ought to be impressed upon every one interested in the prosperity of the South. Florida is a good illustration of what hotels do. It is the only Southern State in which a large number of really first-class hotels can be found, and the result is that tens of thousands of the richest people in the country annually visit that State. It is estimated on good authority that Northern visitors spend not less than \$7,500,000 every winter in Florida. It has been said that the prosperity of Atlanta is largely due to the Constitution and to the Kimball Hotel. The Constitution as a wide-awake, vigorous paper has made Atlanta known all over the world, and the Kimball House has furnished such good accommodations to the visitors to that city that everybody leaves the place well pleased with Atlanta. The people of Anniston show-

ed their faith in the value of these two great agencies first when they built that magnificent Anniston Inn, which is the delight and charm of every visitor, and secondly when they organized a company backed by an abundance of money to publish a first-class daily paper, managed by one of the best known newspaper men in the South. It would have been folly, however, to have built this Inn and furnished it in its present splendid style, unless it was properly managed, and so they arranged with an experienced Northern hotel keeper to run this house so that it should be equal in every respect to the very best of Northern hotels. Those who have stopped at the Inn and noted with delight the perfection of its cleanliness, its neatness and its table and have then been forced to put up at some of the other hotels in the South, become enthusiastic advertisers of this Inn, and thus of the whole town. It has already paid the town many times its cost, and it will for years to come be one of Anniston's greatest cards, and so with the new daily paper. It would have been folly to raise money for such an enterprise and then entrust its management to men without the ability to make a really first-class daily paper.

We are glad to see that the founders of Bessemer, one of the young giants of new towns, also appreciate the importance of hotels and papers, and so they propose to build a fine hotel to cost from \$75,000 to \$100,000, to be furnished in the best manner and surrounded by beautiful grounds with grass, shrubbery and flowers to please the eye, while its management will be in keeping with these outward adornments. They have also arranged for the publication of a paper in which report says Major Burke, of the New Orleans Times-Democrat, is interested. Major Burke's reputation is a sufficient guarantee that Bessemer's new paper will be something of which the town can be proud. These two enterprises show that Mr. De Bardeleben and his associates in founding Bessemer realize that something more than furnaces is needed in building up a great city, and they are determined that Bessemer shall have these essentials. We hope to see many other towns following the lead of these places.

"I must congratulate the Manufacturers' Record Co. on 'THE NEW SOUTH,' for a copy of which beautiful work I am indebted to you. I don't know when I have enjoyed a book more thoroughly or gained so much valuable information as has been the result from a perusal of 'THE NEW SOUTH.' So writes Mr. Edward A. Oldham, editor Winston (N. C.) Sentinel.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

Views of Judge Kelley.

Hon. Wm. D. Kelley, whose recent letter to the MANUFACTURERS' RECORD on the industrial progress of the South attracted such universal attention and caused the investment in that section of immense sums, is again traveling in the South. For some weeks he has been staying in Anniston, which seems to have charmed him so much that he is loth to leave, and last week the citizens of that place tendered him a grand banquet in honor of his 74th birthday. In an interview published in the Anniston Hot Blast, Judge Kelley said, regarding his present visit to the South:

"The assembling of Congress brought my autumnal visit to Tennessee, Alabama and Georgia to an early close and left me with an eager desire to see more of the 'New South,' that is, of those portions of the South which have been vivified and animated by a desire of the people to promote their own prosperity and that of the country by manufacturing the material products of their respective States for home use and exportation. On the adjournment of Congress I proceeded directly to Florida, and with the best aids that courtesy and enterprise could lend me, devoted myself to the study of the resources of that wonderful State, which has, too generally, been believed capable of producing only oranges, early vegetables for exportation and flowers, but which is destined to take front rank among the agricultural States of the country in the production of great staples."

Her industrial history is a story of incredible blundering and mismanagement by the free-trade theorists who controlled her destinies prior to the war. It affords a splendid object lesson for those who would impress upon the Southern mind the beneficence of the truths embodied in the system of national economy with which the protectionists of America confront the cosmopolitan political economy pressed upon us by the Cobden Club and other agents of the steel and iron workers and cotton and woolen manufacturers of England. I venture the prediction that if the Southern democracy and their Northern free-trade allies shall fail to repeal the existing duties on sugar and rice, and will consent to the repeal of the tobacco tax, the census which shall be taken in 1900, from which we are separated by less than thirteen years, Florida will be pre-eminently the cane sugar and rice-growing State of the Union, and will stand high as a grower of tobacco.

On her alluvial fields and reclaimed lands below the frost line, her tobacco will equal the best of Cuba, while the production of her northwestern counties will compete with great advantage with the tobacco grown in the valleys of Connecticut, Pennsylvania and other Northern States. Nothing but an earthquake that shall swallow up the peninsula, or such fatal legislation as shall repeal the protective duties on rice and sugar, and retain the onerous and harassing war taxes on tobacco, can prevent the fulfillment of these predictions.

You naturally want to hear my opinion of Anniston as I now behold her. It is but about three months since I came to Anniston, and on my return home ventured very publicly the prediction that she was destined within two decades to take a prominent position among the iron producing centers of those marvellously endowed states, Tennessee, Alabama and Georgia. Should her progress toward this proud destiny be as marked in each succeeding quarter of a year, as it has been in the one which has intervened between my visits, I now venture the prediction that the first decade will do what I then thought it would require twenty years to accomplish."

An Evil Spirit.

A GENTLEMAN was in Athens Friday who brings us some long-expected news from Birmingham, Ala. He says that one day this week \$1,500,000 worth of paper there went to protest, and real estate is feverish and excited and in no demand. He says the people are greatly excited, for they realize the fact that the predicted collapse is now about on them, and it will ruin thousands. This is the first serious financial disaster that has come upon Birmingham, and it will doubtless be quickly followed by others that will prick the bubble of fictitious values and bring property in the place down to its legitimate price. Our informant further says that the ore found around Birmingham is only fit for stoves and piping, and can never be made into steel. This, of course, renders it unfit for steel rails, and greatly contracts its sale.—Athens (Ga.) Banner Watchman.

And so Birmingham is gone up! "its iron ore cannot be made into steel, and this renders it unfit for steel rails!" How sad that the poor deluded mortals who are still buying Birmingham dirt do not realize that the place is dead, that the bubble has been pricked and that an immense amount of real estate paper has gone to protest! Despite these things people continue to buy land, new factories are going up by the dozen, and everybody in Birmingham is apparently happy under the impression that the town is solid,—and the town is solid, the Watchman to the contrary notwithstanding.

The man who thinks Birmingham has reached its highest point is greatly mistaken. Birmingham has just gotten well started. Of course, real estate prices may fluctuate, but Birmingham is not built on real estate speculation. If the Watchman will study the resources of the iron and coal sections of Alabama and the possibilities of industrial development based on a foundation as solid as the mountains of ore themselves, it will hardly feel inclined to attempt to predict the decline of Birmingham, or for that matter of any of the other iron centers of Alabama, some of which are making proportionately even greater progress probably than Birmingham.

Why the prosperity of Birmingham, Anniston, Decatur, Chattanooga and other progressive manufacturing centers from which are radiating influences that will enhance the prosperity of the whole South, should arouse the petty jealousy of so many towns we are at a loss to know. With what evident relish the Watchman spreads the reports—false though they be, we are glad to say—about Birmingham. "As a sweet morsel it roils them under its tongue," rejoicing over what it believes is the downfall of a thriving town, which has been the beacon light in drawing capital to the harbor of Southern investment. Birmingham's prosperity has led the way for the redemption of the South from the poverty of the last twenty years, and yet Birmingham, Anniston, Chattanooga and all other places that have made such signal progress seemed to have aroused the jealousy of the towns that are too dead to imitate their progress. This spirit does no credit to the South, and we are surprised that the Watchman should have lent itself to the encouragement of such envy and jealousy.

Florence, Alabama.

If the business men of Florence display the same energy in building up manufactures as they have done in grading streets, improving the town generally and advertising its advantages, and especially in advertising the great sale of property commencing on April 26, then Florence will give many of the growing industrial cities of Alabama a pull for the first place that will astonish some of them. For a month or more several hundred men and many horses and wagons have been steadily employed under skillful direction in laying out streets and enhancing the beauty of this already most charming town by many improvements. We venture to say that there will not be a stranger in the town at the big sale next week who will not be surprised at the beauty of this place and at the work accomplished during the last few months. The men who are at the head of this movement wisely decided at the beginning of their work to go at it vigorously and to show by their energy that they were in earnest, and by the amount of money spent in improvements to prove their faith in its future. People who have visited this historic old town recently have been surprised to find what an immense amount of work was being done in cutting new streets, grading and improving them, and putting everything into such a shape that the work of building houses can go on very rapidly. This activity has been productive of much good and will redound to the advantage of the town. Those who have never seen Florence have missed seeing one of the most charming towns in the South.

WE invite attention to the full page advertisement of the Brunswick Land, Improvement & Colonization Co., of Brunswick, Ga. This company has been incorporated with a capital stock of \$3,000,000, two-thirds of which, we have been informed by the president, English capitalists have contracted to take as soon as the other one-third has been subscribed in this country. Mr. Rogers, the president, writes us that arrangements have been made for running a regular line of steamers between Brunswick, Ga., and European ports, to commence on or before the first of August. Not less than five steamers are to be employed. The natural location of Brunswick and its advantages for foreign trade ought to make it an important exporting and importing point, and the plans of this company, if fully carried out, and we are assured by Mr. Rogers that they will be, would result in the development of a very important shipping trade at Brunswick and the colonization near that town of many settlers. The prospects of the company are very favorable, and active work in carrying out its great enterprises, it is said, will soon be commenced.

The Growth of Fayetteville.

[Special correspondence MANUFACTURERS' RECORD.]

FAYETTEVILLE, N. C., April 9, 1887.

Among the older interior cities and towns of the United States, there are few now flourishing that have not encountered reverses. Indeed, a community which has grown steadily from hamlet to village, village to town and town to city without a single set-back is an anomaly in the United States. The changes wrought by railroads, by the settlement of the vast agricultural lands of the West and by the numerous labor-saving inventions of the century have affected the business of many communities, destroying industries that once flourished and compelling the adoption of new ones. Fayetteville has had her share of set-backs, and, having bravely surmounted them, is now advancing with steady movement toward a prosperity far surpassing any in her past history. It may be said of this city that it has passed through three epochs and has now entered upon a fourth. The first, or colonial period, was referred to in a former letter. The loss of prestige and of business caused by the toryism of the people was not recovered until 1812, when the men of this place and of Cumberland county were foremost in arraying themselves on the side of the republic. From then until 1861 the trade of the town increased from year to year. During the long period of hard times that began 1836-'37 there was no falling off in business and no loss of capital. When secession occurred its commerce was great and many manufacturing industries thrived. In the city, or on the water-powers in its immediate vicinity, were carriage, wagon and wood-working establishments, saw, grist and flour mills, tool and machine shops, seven large cotton factories, and a national arsenal in which 800 skilled workmen were employed. It was the chief market of the world for turpentine and rosin, and did an extensive cotton trade. Its commerce with the West Indies was also very large. The war inflicted a sad blow upon this thriving city. Young men and those of middle age went into the army, many never to return. The place was overrun by the Union forces, who burned the arsenal, the cotton factories and many other manufacturing establishments. When peace was restored the majority of those who had been wealthy were ruined. In 1866 began the third epoch of Fayetteville. Her business men were not faint-hearted because of their reverses, or on account of the unsettled conditions, social and political, that followed the war. Out of the wrecks they saved enough to enable them to begin anew. By their frugality, their shrewdness and their acquaintance with the needs and the resources of the people of North Carolina, they slowly but surely made headway in reorganizing their business and putting it in line with the changed conditions of the period. Their pluck and perseverance were rewarded, as the figures of the tenth census show. Fifteen years of hard work had restored much of the old trade, had organized new and paying industries and had prepared the people for the new epoch into which they have entered. The Fayetteville of to-day is a very different place from that of 1860. While many ancient buildings remain, there are new houses of modern style for business and residence purposes that will compare favorably with any to be found in the State. The long lines of teams from a distance that once filled the central thoroughfares have disappeared, but the Cape Fear & Yadkin Valley Railroad brings from some of the richest counties a traffic that more than compensates for the loss, and every mile westward gained by that road will increase its volume. An extension of the same road into South Carolina has also increased business here, and when the short cut of the Atlantic Coast Line from Wilson, N. C., (which has already reached this point) shall have been completed to Florence, S. C.,

there will be a large increase of traffic from that source. This uniting of the head of navigation on the Cape Fear with these roads from the North, South and West has done much for this city within two years, but the new business thus acquired is but the forerunner of that which will come when traffic has adjusted itself to the new conditions, and the advantages of this city become widely known.

An approximate conception of the industries of this city may be obtained from statistics compiled in 1884, but the general average of increase since then must exceed 25 per cent. At that time the annual receipts of cotton were 25,000 bales; of spirits of turpentine, 18,000 casks; of rosin, 60,000 barrels. There were then five cotton factories, seven cotton gins and one wool-carding establishment, a cotton-seed oil mill, one flour and four grist mills, three lumber and two planing mills, one spoke, hub and rim factory, a manufactory of turpentine stills and another of tools for gathering the gum, two carriage and wagon factories, and more than two-score lesser industries. In near proximity is the celebrated Tokay vineyard, owned by Hon. Wharton J. Green, from whose 125 acres of grape-bearing vines choice wines are made on an extensive scale that have established for themselves a superior reputation. The industries named, together with the shops of the Cape Fear & Yadkin Valley road and the lines of steamers that ply daily between this city and Wilmington, furnish steady employment to many people and a home market for the farm, garden and orchard products of the surrounding country.

As a center for general manufacturing Fayetteville has advantages second to none and superior to those of the majority of Southern cities. The location is in many respects unusually favorable for a large manufacturing town. It was this more than all other considerations that led to its selection as a site for one of the national armories. Situated on the Cape Fear, 140 miles from the ocean; surrounded by a well-watered and fertile region adapted to every form of agriculture pursued in temperate and semi-tropical countries; occupying land much higher than the watercourses, so that drainage into running streams is afforded on every side; blessed with a climate free from all extremes of heat or cold, the site is all that could be desired. Although the river is not navigable above this point, yet for nearly a hundred miles it affords facilities for floating rafts and running logs from the virgin forests through which it flows. The center of a fine cotton-growing district, its factories can get their lint at their doors, thus saving transportation charges. The railroad brings hardwoods, iron and coal from the West at as low a cost as they can be laid down in other cities near the coast, and when the development at several points on its line are fully made, it will furnish those staples of manufacturing at still lower figures. Moreover, and this is no slight advantage, Fayetteville was for a long period a manufacturing center, and there grew up in and around it a considerable body of skilled mechanics. The 800 men employed in the United States armory before the war, with their families, were an influential element of the community. It was always respectable to be a first-class mechanic in Fayetteville, and the greater his skill the more highly was he appreciated. While the city is growing fast, (its population has increased 40 per cent. since 1880,) there is no boom in the sense that word is now employed. Land in the city and vicinity is very low, and the people understand their interests well enough to keep it so for the present. There is therefore every inducement for those seeking a good place in which to establish some industry to visit Fayetteville.

B. S. P.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$3.00 a year.

Street Pavements.

Continuing our comments on street pavements, begun on page 201 of our issue of March 19th, we propose in this number to give some extracts from various authorities in reference to street pavements.

The Medical News, of Philadelphia, Pa., of October 9, 1886, commenting on the street pavements of that city, said: "The question of proper street paving means more, involves more, and is of more importance than is, here at least, generally thought. It is not merely for the comfort of those who drive in carriages, whether for pleasure or on duty, that is concerned. There are questions of scarcely-to-be-calculated savings of time, money and strength, of the general cleanliness, and therefore of the general health, to be considered. How great a factor in the breeding and then in the carrying of disease germs and of a thousand dangerous fungi the accumulated decaying dust and filth of our streets may be we do not accurately know. The hopeless impossibility of cleaning with thoroughness hundreds of miles of streets, paved as barbarously as ours are, grows daily more evident. As a matter of economy to horse owners, a class into which of necessity many physicians enter, a better pavement than either Belgian blocks or asphalt—we do not speak of the cobble relics of the 'stone age' which disgrace us—is greatly to be desired. Asphalt fills many of the requirements, but unless graveled daily, as is done in London, it becomes a most dangerous horse-trap in wet weather.

The Scientific American Supplement, No. 578, January 29, 1887, contains a discussion on street pavements for residence streets by the Western Society of Engineers. The following brief extracts from the opinions of the experts engaged in that discussion are of interest. C. B. Holmes said: "The Chicago City Railway Co. has used wood extensively in paving its tracks, and has a large variety of it—pine, hemlock, cedar, maple, elm, gumwood and *lignum vita*. The gumwood was in round blocks, and in a short time wore into an oval shape, like an inverted saucer, and became so objectionable for horses to travel on we had to take it out. None of the woods lasted for a satisfactory period, and all were very hard on horses. When frozen, the animals would strain all their cords and muscles to retain a foot-hold on the slippery pavement, and soon became disabled, many of them falling and breaking limbs or otherwise injuring them. In the summer time the case was but little better, when the blocks were wet and 'greasy.' On State street, from Madison to Lake streets, the company renewed the pavement regularly every six months, and sometimes it would last only four months. But, in my estimation, a much more serious objection to wood is the effect on health. Let any person come into the city from the lake or the country, where air is pure, any warm morning in summer just after a shower and walk down any street which has been paved for six months with wood and he can taste the bitter poison in the air, which comes from the fermentation and decomposition of the fibres of the wood, saturated with the vilest of excrements and droppings from horses; and the wind blows these germs of disease into the houses of the people, causing diphtheria and scarlet fever and kindred diseases, which prevail to such an alarming extent in a city paved with wood. Our experience, extending over a long term of years, condemns utterly all kinds of wood pavements, for the reasons given: short-lived, always out of repair, expensive and very unhealthy. My motto is: *Anything but wood.*"

L. P. Morehouse said: "To insure a comfortable paved street for its residents, there must be freedom from noise, dust and mud, and to satisfy the property owners these advantages must be obtained at a reasonable expense. The only objection I have heard urged against asphaltum pavements are the

unpleasant clicking of horses' hoofs on them and their smoothness, which, when they are unsprinkled, allows the dirt tracked on them to blow off in fine dust." Of macadam and gravel roads he said: "In many places the material used is very objectionable on account of the dust, the top dressing and upper layers grinding up under traffic into a fine powder that becomes a serious annoyance whenever a brisk breeze stirs it up and carries it into the houses of the much suffering residents. It must be admitted from our standpoint that such roads are not satisfactory. Under the delusion that a road which is satisfactory for driving purposes is necessarily a desirable improvement for the persons residing on it, we find that the average householder accepts such a road as a matter of course, and submits to the rapid deterioration of his furniture and his wife's good nature with a feeling of what he may suppose to be content, but which is really resignation."

Mr. S. A. Bullard said: "A pavement for a street must be (a) serviceable, (b) economical, (c) inoffensive, in order to be satisfactory to those who use or pay for it. To be serviceable it should be a firm, smooth, regular surface, but not entirely unyielding. The economical pavement is one having moderately lasting qualities and having a correspondingly moderate cost. Pavements give offense (a) by the presence of disease-producing germs, (b) making or wearing into dust, (c) giving rise to noise in the passage of vehicles. The first source of offense is most serious, and should never be overlooked. When a pavement produces or distributes disease germs it should at once be removed as a public nuisance. The second source—the wear of a pavement—the wear should never be so rapid as to make the accumulation of dust or dirt on the street from that cause perceptible. The tracking of dirt or mud on pavements will probably be as great on one as on another. The third source is determined by the smoothness of the surface and the yielding qualities of the materials."

Southern Prosperity on Solid Basis.

Apprehension has been expressed that the South, in the matter of industrial development, is moving rather too fast. Of the vigor and vehemence of the movement in that quarter there can be no doubt. Outside of this continent it has no precedent in modern history; but it has nearly always happened, even here, that a tremendous boom of this kind has been followed by a reaction which wrecked many a fortune and many a promising enterprise; and prudent men not unnaturally ask whether this Southern movement is not likely to proceed beyond the lines of healthfulness and safety. The question is well worth considering, for Northern capital is now pouring into the region in great quantities, and the South is staking everything on the success of its various enterprises.

Of course, it is clearly impossible to eliminate the element of speculation from a region where industries are being created, expanded and pushed forward with so much force; but it is nearly certain that purely speculative enterprises are only a small proportion of the whole number now engaging the attention of Southerners. The boom in the South is attributable almost solely to the development of the natural resources of the States, and therefore it receives its impetus from an actual and large increase of wealth. There is unusual activity because there is an unprecedented creation of wealth from the soil. For example, the cotton States now produce nearly one-third more cotton than before the war. But this is only one item. The development of the iron industry is another. Quite as important as either is the division of the large plantations into small farms, insuring more thorough cultivation, and the tendency of plant-

ers to give attention to truck farming and to the growing at home of food supplies. In short, the movement, as a whole, is simply toward that large and free diversification of industry which is only possible in a community devoted to manufacturers as well as to agriculture, and which is one of the first essentials to prosperity.

Thus not only is the new South depending for its strength upon the use of the materials supplied by nature, but it is making far more effective use than ever before of the productive power of its people. Before the war white labor grew 10 per cent. of the cotton. Now, it is said that half of the cotton is grown by white labor. The people have learned from a happy experience that there is a tangible blessing in toil, and that the earth beneath their feet contains far more enduring and honorable wealth than that which was represented by a servile population. In five years the wealth of the South has increased more than 40 per cent. while the population has grown but 16 per cent. Southern enterprise, under fair conditions, has compensated many times over for the loss of slave property. It has demonstrated that freedom for human energy is the best condition under which a community can start in the race for wealth. In these circumstances, Nature having been lavish to the region in soil and climate and in all the elements of riches and power, the supposition is fair that the forward movement is likely to endure and to gain strength as it proceeds. Speculation will hurt some and ruin others, but the materials which form the basis of genuine prosperity are there and the people, as a whole, will gain the advantages which these place within their reach.

The possible effect of this Southern industrial growth upon the North is deserving of consideration. It is freely asserted and in some quarters believed, that the growth of the cotton and iron industries in the South, and the increased production of food in that part of the country, will seriously injure Northern industries of the same kinds. We have never had any faith in prophecies of overproduction. We shall not produce too much wealth until human desire for wealth is satisfied, and that condition of things will not be attained while the earth rolls. If the South is creating riches, it is simply adding to the common stock of wealth, and, in one way or another, the whole country will have benefit from the operation.

Of course it is possible that the North and the South together may make too much of some one thing, as for example, low-grade cottons. But even the danger from this source has been much exaggerated. Despite the vast increase of cotton spinning and weaving in the South, of late years, the market is not now over-stocked with cotton fabrics. The Southern manufacturer has advantages, but the Northern manufacturer has others which fairly offset them. And, at the worst, a tendency to the overproduction of any commodity always corrects itself. It forces the man who works at a disadvantage to turn his attention to something that he can make with advantage and with profit. It is possible that the South may eventually have the monopoly of the manufacture of low-grade cottons; but that day is far distant. The continued enlargement of the great New England cotton mills shows that no alarm at the prospect is felt in that quarter. And, by the time the South is ahead in this branch of the business, the North will be engaged in making the finer fabrics which we are now buying abroad at the rate of a hundred million dollars a year. The sound and wise theory is that there is room here for every useful industry; that we shall never make more good things than our people will want, and that too large development in any one direction will be corrected by the natural tendency to diversification. The New South, instead of being a menace to the nation, is to be regarded as one of the most vigorous and healthful and useful of its members.—The Textile Record.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

Anniston.—The mayor will receive bids for the erection of the city hall, previously reported. It is to be two stories, 120x120 feet.

Anniston.—Hill, Hardy & Co. will erect a \$10,000 building on Noble street.

Anniston.—Garner & Son, of Tampa, Fla., contemplate erecting a steam laundry.

Ashby.—Fire brick works are to be started. Work will begin at once.

Bessemer.—The name of the company reported last week as formed to establish steam brick works, is the Bessemer Brick Works. The capital stock is \$10,000. A. R. Magrue is general manager.

Bessemer.—James P. Witherow, Pittsburgh, Pa., has received the contract to build the 2 furnaces for the DeBardeleben Coal & Iron Co., reported last week. The capacity of each will be 100 tons daily.

Bessemer.—It is probable that a nut and bolt factory will be built by parties from Reading, Pa. Negotiations are pending, it is stated, for the establishment of several other manufactories.

Bessemer.—The New Orleans Land & Building Co., capital stock \$100,000, has been organized with J. C. Morris as president. The company will erect about 30 buildings at once.

Bessemer.—The Bessemer Land & Improvement Co. will build water works at once.

Bessemer.—W. W. Davin, of Birmingham, previously reported as to build terra cotta works, has with others organized the Bessemer Terra Cotta Lumber Co., capital stock \$50,000. Works will be built at once. Mr. Davin is president, William Berney, treasurer, and William H. H. Judson, secretary.

Bessemer.—The Bessemer Printing & Publishing Co., capital stock \$75,000, has been chartered by William H. Judson, of New Orleans, La., and A. T. Smythe, of Charleston, S. C.

Bessemer.—The Natchez Land & Improvement Co., capital stock \$500,000, has been chartered by E. A. Burke, of New Orleans, La., and J. T. Avery and T. N. Carpenter.

Birmingham.—It is reported that a 100-ton iron furnace will be built near Village creek. The East Birmingham Land Co. can give information, if true.

Birmingham.—The Birmingham & Shade Valley Land Co., capital stock \$200,000, has been incorporated by W. P. Kearney and others.

Birmingham.—The Smith Sons Gin & Machinery Co. have built a one story addition, 50x30 feet, to their factory.

Birmingham.—The Birmingham Cement Manufacturing Co., previously reported, have purchased machinery for their works.

Birmingham.—Works are to be erected to manufacture sad irons. The capacity will be 10 tons daily. The East Birmingham Land Co. can give particulars.

Blountsville.—Blount county will build a new court house. C. F. Hamill can give particulars.

Calera.—A street railroad is reported to be built. J. D. Hardy can probably give information.

Calera.—The Calera Land Co. want to purchase machinery for manufacturing shuttles, bobbins and spools.

Choccolocco.—It is stated that another brick-yard will be started.

Clanton.—A Northern company has purchased and will develop mineral lands near Clanton.

Eufaula.—It is stated that the Montgomery Iron Works, of Montgomery, have contracted to furnish machinery for a 15-ton ice factory.

Florence.—Arrangements have been made for the building of a furniture factory.

Florence.—The Christian Church will erect a new church.

Gadsden.—The capital stock of the company recently reported as formed to build a paint mill is \$10,000. Its capacity will be 8 tons daily. James E. Chumley is interested.

Greenville.—W. J. Dunklin will erect the bucket factory, reported last week.

Greenville.—J. T. Perry will build the street railroad recently reported.

Isbell.—A saw mill has lately been erected 2 miles from Isbell, by Gibson & Bell.

Jacksonville.—The Jacksonville Land Co. capital stock \$200,000, has been organized with A. T. London as president; J. C. O'Connell, vice-president, and D. F. Lowe, secretary.

Mobile.—It is reported that the Mobile & Central American Mail & Trading Co., capital stock \$1,000,000, will be organized shortly. The company will be privileged to build iron and wooden ships. H. Austill can give information.

Powderly.—It is reported that a planing mill will be built.

Powderly.—The Powderly Steam Brick Manufacturing Co., capital stock \$2,500, has been incorporated.

Selma.—The name of the \$50,000 stock company, previously reported as organized to build a rolling mill, is the Selma Rolling Mill & Chain Works Co. C. L. Howard is president and R. S. Wetmore secretary. The company have secured a five acre site for their plant and will begin work at once.

Selma.—The Automatic Refrigerator Construction Co., of New York, contemplate erecting a plant to cost about \$30,000. H. H. Stewart, Selma, can probably give information.

Selma.—A company is being formed to bore for natural gas and oil. Robert Wetmore can give information.

Sheffield.—C. D. Woodson will receive bids until May 3, for the erection of a building for the Sheffield National Bank. L. B. Wheeler, Atlanta, Ga., is architect.

Tuscaloosa.—A \$25,000 stock company has been organized to manufacture bricks and tiles, with Thomas M. Devereux, of Cincinnati, O., as president, William Gibson, Cincinnati, secretary and treasurer, and J. L. Maddox, Tuscaloosa, superintendent.

ARKANSAS.

Benton.—It is reported that a smelter is to be erected.

Corning.—A company has been incorporated to build a railroad to Cherokee Bay.

Golden City, Logan county.—The Pedro Mining & Milling Co. are developing mines.

Golden City.—The Arlington Mining Co. has been formed to develop mines.

Hot Springs.—The Cosmos Mining & Smelting Co. has been organized with W. Strueli as president; J. Grossman, vice-president; J. Burger, secretary, and G. Limbery, treasurer.

Hot Springs.—The American Mining Co., of St. Louis, Mo., previously reported as to erect a smelter, will also erect a 10-stamp mill.

Hot Springs.—J. P. Mercer will develop mines near Hot Springs.

Little Rock.—The North Arkansas Telephone Co., capital stock \$10,000, has been incorporated with B. F. Matthews as president.

Little Rock.—McCarthy & Co. have received the contract to build part of the extension of the Arkansas Valley Railroad, previously reported.

Little Rock.—The Little Rock & Alexandria Railroad Co., capital stock \$2,500,000, has been incorporated to build a 120-mile railroad from Little Rock to Alexandria. The directors are S. W. Markle, William Farrell, J. H. McCarthy and John B. Jones, of Little Rock, and B. W. Johnson, Camden.

Little Rock.—P. B. Price, Claiborne Watkins and Farley Price have incorporated the Price Lumber Co., capital stock \$10,000, to manufacture lumber, shingles, &c. P. B. Price is president.

Little Rock.—It is stated that E. H. Leaming, of Greenville, Ind., has purchased 5,000 acres of timber lands near Little Rock, and will build a lumber mill.

Little Rock.—The Arkansas Industrial Co. have purchased \$5,000 of machinery to manufacture pressed bricks.

Little Rock.—The Poteau Cattle Co., capital stock \$250,000, has been chartered to buy and sell all kinds of live stock, erect slaughter and packing houses, &c. The directors are A. B. Meeker, J. W. Cheek and A. J. Warren.

Little Rock.—The Woodlawn Improvement Co., capital stock \$250,000, has been incorporated with W. B. Worthen as president.

Little Rock.—John B. Jones, A. B. Meeker and A. J. Warren have chartered the South Ouachita Mining Co., to do a general mining and smelting business. The authorized capital stock is \$2,000,000. Mr. Meeker is president.

Tillar.—O. T. Wilson, previously reported as erecting a shingle mill, will build a tramroad.

Winchester.—It is reported that a barrel stave saw mill will be erected.

FLORIDA.

Campville.—R. J. Camp will receive proposals until May 1 for grading and furnishing ties for the Melrose & Micayana Railroad road from Campville to Rochelle.

Dutton.—Wells & Mitchell have started a chair factory on a small scale.

Parkersburg.—The Parkersburg Land Co. are surveying a 4-mile railroad.

Pensacola.—D. Rowan will erect an iron front building to cost \$6,500.

St. Augustine.—The First National Bank will rebuild their building lately burned. The St. Augustine Improvement Co. have the contract.

GEORGIA.

Americus.—Allen Fort is organizing a company to build a cotton factory. The capital stock will be \$100,000.

Americus.—Hitt & Co. will erect a Taylor compress, but have not decided where they will locate it. They will probably erect several other compresses.

Americus.—The name of the company reported last week as formed, to develop timber lands and encourage the starting of manufactory, by H. C. Bayley and others, is the Americus Land & Lumber Co. The company have secured about 30,000 acres of timber lands and will build several large mills along the Americus, Preston & Lumpkin Railroad.

Americus.—Subscriptions are being received towards the erection of a hotel to cost \$60,000.

Atlanta.—E. F. Gould, of Lake Helen, Fla., contemplates erecting a 9-story building on Decatur street, to cost about \$150,000, L. B. Wheeler has prepared plans.

Atlanta.—James A. Adams, J. K. P. Carlton, C. J. Simmons, J. J. Barnes, Z. J. Cowan and T. F. Corrigan have chartered the Georgia Excelsior Manufacturing Co., capital stock \$8,000, to manufacture excelsior.

Atlanta.—The Atlanta Cotton Compress & Warehouse Co. have changed their name to the Atlanta Compress & Warehousing Co., and have increased their authorized capital stock to \$500,000.

Atlanta.—The Woodward Lumber Co., capital stock \$25,000, has been organized to manufacture sash, doors, blinds, etc., with D. Woodward as president, and H. M. Avery, secretary and treasurer.

Atlanta.—The Atlanta & Hawkinsville Railroad Co., H. L. Collier, chief engineer, will receive bids until May 4 for building about 70 miles of railroad. No bid will be received for less than 5 miles.

Brunswick.—There are prospects of a cotton compress being erected.

Brunswick.—U. T. Putnam is building a short railroad on Cumberland island.

Cairo.—Dekle & Butler will at once rebuild their saw mill reported in this issue as burned.

Cedartown.—The Cherokee Land & Improvement Co., A. Richardson, secretary, are negotiating for the erection of an iron furnace.

Cedartown.—The city will issue bonds to build a \$10,000 school-house.

Cedartown.—The Cherokee Land & Improvement Co., previously reported, have opened two manganese mines.

Chauncey.—Bush Bros. are starting a brick yard.

Chauncey.—A large saw and planing mill is being built by A. B. Steel.

Columbus.—The Clegg Manufacturing Co. will put about 50 additional looms in their cotton factory.

Dalton.—The Dalton Manufacturing Co., capital stock \$10,000, has been incorporated by H. C. Hamilton, G. W. Oglesby, J. W. Barrett, F. T. Hardwick, D. K. McKamy, R. M. Herron and S. P. Maddox.

Dalton.—F. T. Hardwick, G. W. Oglesby, J. W. Barrett, H. C. Hamilton, R. M. Herron, D. K. McKamy and S. P. Maddox have chartered the Dalton Electric & Gas Light Co., capital stock \$10,000.

Dalton.—The Queen Mining & Prospecting Co., capital stock \$25,000, has been incorporated by J. W. Barrett, F. T. Hardwick, G. W. Oglesby, R. M. Herron, D. K. McCay, W. W. Van Ness, Jr., and S. P. Maddox.

Dalton.—It is stated that a 100-ton iron furnace will be built. If true, H. C. Hamilton or H. A. Wrench can probably give information.

Dalton.—Barrett, Denton & Lynn contemplate putting roller machinery in their flour mill.

Dalton.—The Rocky Face Springs Co. has been chartered to improve lands, engage in mining, etc., by H. A. Wrench, H. C. Hamilton and others. The authorized capital stock is \$50,000.

Gainesville.—The Gainesville Cotton Manufacturing Co., previously reported, has been organized with Allen D. Candler as president; C. C. Sanders, vice-president; W. A. Brown, secretary and treasurer, and Minor Brown, superintendent.

Hawkinsville.—D. C. Fitch and others have formed the Hawkinsville Agricultural & Machine Co., to manufacture agricultural implements, &c.

Holly Springs.—A mica mine is being developed by H. F. Miller.

Macon.—An agricultural implement factory is to be erected. A site has been purchased from W. H. Whitehead, who can give particulars.

Macon.—It is stated that the Central Railroad & Banking Co. will move a cotton compress from Savannah to Macon.

Milledgeville.—L. H. Andrews wants machinery for making brooms.

Rome.—Efforts are being made to organize a company to manufacture fence machines.

Villa Rica.—The Villa Rica Lumber Co. has been chartered, with A. S. Johnson as president and general manager. The paid-in capital stock is \$10,000.

KENTUCKY.

Ashland.—Henry Herrmann, Gustav Possehl and John Dauenhauer have incorporated the Herrmann Desk Co., capital stock \$20,000, to manufacture desks, etc.

Ashland.—Henry Herrmann, Gustav Possehl and John Dauenhauer have chartered the Herrmann Dining Room Furniture Co., to manufacture furniture, etc. The capital stock is \$10,000.

Ashland.—The Herrmann Chamber Suit Furniture Co., capital stock \$30,000, has been incorporated to manufacture furniture, etc., by Henry Herrmann, Gustav Possehl and John Dauenhauer.

Ashland.—The Herrmann Bureau Co. has been incorporated to manufacture bureaus, etc., by Henry Herrmann, Gustav Possehl and John Dauenhauer. The capital stock is \$15,000.

Ashland.—Edwin P. Merritt, Charles H. Merritt and William H. Clarkson have incorporated the New Jersey Land & Water Utility Co., capital stock \$200,000.

Covington.—J. P. Dieters, J. S. Rittenhouse and William Gilman have incorporated the Sandy River Coal Co., capital stock \$60,000, to mine and sell coal, build and operate boats, etc.

Flemingsburg.—The name of the company reported last week as to be formed to bore for oil and gas is the Flemingsburg Natural Gas Co. Its capital stock, it is said, is \$20,000.

Louisville.—A large building will be built for the Home of the Friendless. A. G. Munn can give particulars.

Louisville.—Fontaine T. Fox, Jr., B. Whitney Herr and S. Pope have chartered the Reno Mining & Mineral Land Co., capital stock \$75,000.

Louisville.—J. N. Struck, A. N. Struck and George Henry have incorporated as J. N. Struck & Bro., with a capital stock of \$75,000, to operate a planing mill.

Louisville.—Charles T. Ballard, John Churchill, Alfred T. Pope, S. Zorn, A. V. Lafayette, A. S. Hughes and Theodore Harris have incorporated the Inter-State Investment Co., capital stock \$30,000, to purchase and sell land, lumber, minerals, etc., build mills and railroads and manufacture coke.

Maysville.—Thomas A. Davis, J. C. Owens and J. James Wood are interested in the Maysville Natural Gas Co., reported last week.

Owensboro.—J. C. Terrill, R. S. Triplett and others are organizing a company to develop iron ore lands.

Winchester.—S. Solomon previously reported as to build gas works, has purchased a site for the plant and will build at once.

LOUISIANA.

Alexandria.—The Rapides Compress Co., capital stock \$30,000, has been organized with Julius Lion, L. V. Marry, R. W. Bringhurst, N. L. McGinniss, A. Pettengill and G. W. Bolton as directors.

Crowley.—Theodore Schaeffel has received the contract to build a courthouse to cost \$6,000.

Dixie.—J. S. Swann will rebuild his gin, lately reported as burned.

Lake Charles.—J. L. Williams contemplates starting a shuttle block factory, and wants to correspond with buyers of shuttle blocks in the rough.

Lake Charles.—A site has been purchased by Cincinnati parties for a chair factory. J. L. Williams can probably give information.

Washington.—A company is being formed to erect a cotton compress. R. S. Wilkins can probably give particulars.

MARYLAND.

Baltimore.—The Standard Brewing Co., capital stock \$150,000, has been organized with Robert Rennert as president, and Joseph Raiber and Patrick Martin, vice-presidents. The company have purchased and will operate the Rost brewery on the Belair road.

Colora.—The Waring Fertilizer Co., of Cecil county, are adding a third acid chamber to their works.

Frederick.—The Catharine Mining & Manufacturing Co., capital stock \$25,000, has been incorporated with E. C. McSherry, Frank L. Stoner, George W. Hoover, Joseph A. Williamson and R. A. Rager as directors. The object of the company is to develop deposits of iron and copper.

Lonaconing.—The Maryland Coal Co. are building a tram-road.

MISSISSIPPI.

Fort Adams.—The gin of E. E. Row, previously reported as burned, will be rebuilt.

Greenville.—The name of the company reported last week as formed to erect a compress, by George Reed, James A. Deaton and others, is the Planters Compress & Warehouse Co. The capital stock is \$100,000.

NORTH CAROLINA.

Charlotte.—St. Peters Episcopal Church will erect a new building.

Dover.—A saw mill has recently been erected by John W. Moody.

Fayetteville.—A grist mill is being erected by Styron & Bro.

Fayetteville.—It is stated that Arthur H. Lovejoy, of Pennsylvania, will build a shuttle block factory.

Lincolnton.—A spoke and shuttle block factory will be started by Hinson & Keesler.

Lumberton.—Several brick-yards are reported to be started.

New Berne.—W. B. Blades & Bro. are building another saw mill at a cost of \$7,000.

Pittsboro.—The machinery is being received for the Chatham Cotton Mills, previously reported as to be refitted by J. M. Odell, of Concord, and others.

Raleigh.—Jones & Powell have erected a steam mill to saw shingles and wood for fuel, and grinding feed.

Rockingham.—The Great Fall Manufacturing Co. (cotton), Robert L. Steele, president, will increase their capital stock.

Shelby.—The Cleveland Mica Co. has been organized to develop mica mines, with C. B. Streeter as president, and D. E. Sterns, superintendent. Are now developing mines.

Wilson.—It is reported that additional machinery will be put in the Wilson Cotton Mills.

Winston.—The Winston Electric Light & Motive Power Co., lately reported as organized and to erect an electric light plant, will also build gas works. D. H. Starbuck is president.

SOUTH CAROLINA.

Aiken.—The building of water works is again being agitated.

Catawba.—The Catawba Falls Manufacturing & Improvement Co., capital stock \$200,000, has been incorporated by Julius Mills, W. A. Sanders, W. T. Robinson, Jr., and T. H. White. The object of the company eventually is to purchase the Catawba falls and build a cotton factory.

Columbia.—McMaster & Gibbes want to purchase machinery for making cotton into bats, with a capacity of from 3,000 to 5,000 pounds daily.

Fort Mills.—S. E. White, J. L. Watkins, B. D. Springs and others are organizing a company to build a cotton plaid factory. The capital stock will be not less than \$50,000. Work on the factory will soon be commenced.

Greenville.—Efforts are being made to organize a company to manufacture medicines and paper boxes.

Mount Pleasant.—F. Muench, of Charleston, previously reported as contemplating erecting a canning factory, has, with A. F. C. Cramer and John Boyd, of Charleston, and J. H. Patzens, H. K. Jenkins and Albert Hudson, incorporated the Mount Pleasant Canning Co., capital stock \$10,000. Machinery is wanted.

Sumter.—Rufus C. Barkley, of Charleston, and associates have made a proposition to build water works, which will probably be accepted.

TENNESSEE.

Athens.—The Athens Mining & Manufacturing Co., previously reported, will receive bids until May 1 for building a hotel to cost about \$30,000.

Chattanooga.—Luper & Carey will establish a brick yard.

Chattanooga.—Hugh H. Embrey has started a coffee-roasting and spice mill.

Chattanooga.—It is reported that A. Thompson will organize a company to manufacture locomotive valves.

Chattanooga.—W. S. Bell, of Atlanta, Ga., and N. I. Mayes, C. W. Coker and H. L. Davis, of Chattanooga, lately reported as purchasing the saw mill of Hewitt, Wheeler & Parent, and to add new machinery, have organized as the Chattanooga Lumber & Manufacturing Co., with a capital stock of \$100,000.

Chattanooga.—The Chattanooga Canning Co. are erecting additional buildings to enlarge their capacity. The improvements will cost about \$3,500.

Chattanooga.—The Chattanooga, Rome & Carrollton Railroad Co. have selected sites for depots and machine shops.

Chattanooga.—The name of the company reported last week as formed to bore for oil and gas, by Samuel Blair and others, is the Hamilton Natural Gas & Oil Co. The capital stock is \$50,000. The company have contracted with S. B. Logan to sink a well.

Chattanooga.—George Manuel is trying to organize a company to erect a foundry and machine shop.

Chattanooga.—A barrel factory is being erected by Chicago parties.

Chattanooga.—John A. Hart, Mr. Grant and others will organize the Mission Ridge & Chattanooga Water Co., to build water works.

Clinton.—The Thomas Lumber & Manufacturing Co. has been incorporated.

Columbia.—A furniture factory is being erected on Main street by W. J. Oakes.

Crossville.—A shingle and planing mill and a grist mill are being built by Walter Andrews.

Gallatin.—A \$10,000 stock company will be organized to erect a canning factory. George W. Boddie can give information.

Jackson.—J. Duke and others will organize a company to build a hotel.

Jackson.—John A. Pitts, M. S. Neely, J. H. Duke and others are interested in the company reported last week as being formed to build a cotton mill.

Johnson City.—C. K. McCallum and others are building water works.

Johnson City.—An electric light plant is to be built at once. C. K. McCallum can give particulars.

Kingston.—A marble quarry will probably be opened. T. B. Morrison can give information.

Lebanon.—Organ & Thompson will start a broom factory.

McMinnville.—The Falcon Roller Mill Co. has been chartered by W. P. Faulkner and Jesse Walling. They are refitting the Falcon Flour Mill with roller machinery. The capacity will be 100 barrels daily.

Memphis.—The Southern Cotton Oil Co., of Philadelphia, Pa., have purchased a site for their oil mill, which will be built at once. The daily capacity will be 150 tons of seed.

Mossy Creek.—T. H. Heal, of Knoxville, and E. L. Eads, Plymouth, Mass., will, it is said, erect some new machinery to increase the output of their zinc mines.

Nashville.—The Lake Railroad Co. has been incorporated by John Lellyet, John A. McEwen, W. H. Lanier, L. A. Robinson, L. A. Dickerson, William Morrow and W. D. Haggard.

Nashville.—The Nashville Burial Case Co. are preparing to build their new brick factory, previously reported.

Nashville.—Negotiations are being made for the removal of the Noel Flour Mills to West Nashville.

Nashville.—Dennis, Long & Co., of Louisville, Ky., have received the contract to furnish the city with 268 tons of 24-inch and 19 tons of 8-inch iron pipe.

Nashville.—D. C. Scales, M. B. Pilcher, William D. Mayes, James S. Pilcher, M. B. Toney and others have incorporated a cold storage company.

Nashville.—Jungerman & Co. will erect a three-story building on Public square to cost \$10,000, and George Zickler & Co. will erect a three-story building to cost \$9,000.

Shelbyville.—A natural gas company has been incorporated.

South Pittsburg.—It is rumored that the Sequatchie Coal & Iron Co. have decided to build their 2 iron furnaces, previously reported, at South Pittsburg.

South Pittsburg.—Charles J. Duncan, of Nashville, has commenced work on his saw and planing mill, previously reported.

Thompson Station.—W. D. Lavender will rebuild his gin, lately reported as burned.

Woodbury.—James A. Jones, T. B. Mears, L. B. McFerrin, H. A. Wiley and John C. New have formed a company to develop iron ore mines.

TEXAS.

Bonham.—The mayor will receive bids until May 2 for the erection of a city hall and jail.

Brenham.—J. H. Andrews, representing the Van Depole Electric Light Manufacturing Co., of Chicago, Ill., is negotiating for the erection of an electric light plant.

Dallas.—It is stated that the Dallas & New Orleans Railway Co. will be chartered to build a railroad from Dallas to New

[CONTINUED ON PAGE 406.]

**Howard & Bullough's Improved
Slubbing, Intermediate,
Roving and Fine
Jacks.**

Textile machines made by Messrs. Howard & Bullough have been largely used in this country for many years past. They have, however, greatly improved these machines and brought out many valuable inventions in connection with them lately, which are adding very much to the demand for them. Below we give a description of these, with a list of some of the mills which have lately received or ordered these machines.

In the improved roving frame circular casing-off plates are generally supplied for this country. The accompanying cut, however, shows flat casing-off plates. These frames are now made entirely by tool work, and are of superior construction and finish. They contain many valuable patented improvements, including new patented differential motion, which effects great saving in power, wear and tear, and gives more accurate winding, and consequently evener and better work. The swing, or horse head, is very rigid, and has now only one large car-

puzzle to the early inventors. The attenuation of the sliver at the stage of slubbing had proceeded so far that it was difficult to deal with in the sliver cans of the drawing frame, which also occupied too much space. Yet the rove could not be wound upon bobbins, as inventors had not yet solved the problem of making a mechanical arrangement that should secure a uniform rate of winding on a circumference that was growing larger with the addition of every layer. That great genius Arkwright got over the difficulty by a slight modification of the drawing frame, in which he made the receiving cans revolve on a central pivot, by which means the rove was coiled inside. These cans were furnished with a door extending from the top to the bottom, in the manner of the old lanterns that were in general use before the discovery and adoption of gas as an illuminant. From this fact the frame received its name of the lantern roving frame. When the can was full the rovings were removed by girls, carried to the winding block and wound upon bobbins. The machine made a good rove, but it was often much damaged in this winding process, which was also very expensive. The difficulties encountered in this way, amongst

cone drums, the variable results obtained from their action partially overcoming the difficulty, but they still left it necessary in every change of the twist to make a corresponding change in the speed of the bobbin, a change which was not proportional, but such as would preserve the difference between the motion of the spindle and the bobbin unaltered. For this purpose a large number of change wheels were required, and to get at correct results, even with their aid, was found to be beyond the capacity of most managers and over-lookers having charge of the preparatory stages of the material. It was rare that they arrived at a correct result without spoiling a large quantity of work. It was thus impossible, without the greatest pains being taken in the first adjustment of the machines, to make good yarn at all, and its quality could not be altered to suit any different purpose without a remarkable effort of both skill and intellect on the part of both the mechanics and spinners of an establishment.

The idea of automatically accelerating or retarding the speed of the bobbin in relation to the spindle appears to have been first broached by a Macclesfield man named Green, who patented in 1823 a plan for that

OLD DIFFERENTIAL MOTION.

In the slubbing, intermediate and roving frames there are three main facts to deal with, namely, drawing rollers, the spindle and the bobbin. The two former revolve at a constant speed; the latter at a constantly varying one; that is, with a bobbin-lead arrangement, it commences at its maximum rate, which is slightly diminished every time a layer of rove is deposited upon it, until the bobbin is filled, when its rate of revolution is very nearly reduced to that of the spindle. With the flyer leading this arrangement is reversed. As the delivery of rove from the front rollers is at an unvarying rate it is required that the winding surface of the bobbin shall take it up in the same manner. This surface being a constantly enlarging one, it becomes necessary, in order not to stretch the rove, that its rate of revolution shall be retarded in exact ratio to its increased surface. Hence the requirement of the "differential arrangement" for driving. This is the problem Mr. Holdsworth had to solve, which he accomplished by the method shown in the illustration (Fig. 2) which we proceed to describe.

It must be borne in mind that the power to drive all the parts of the machine is de-

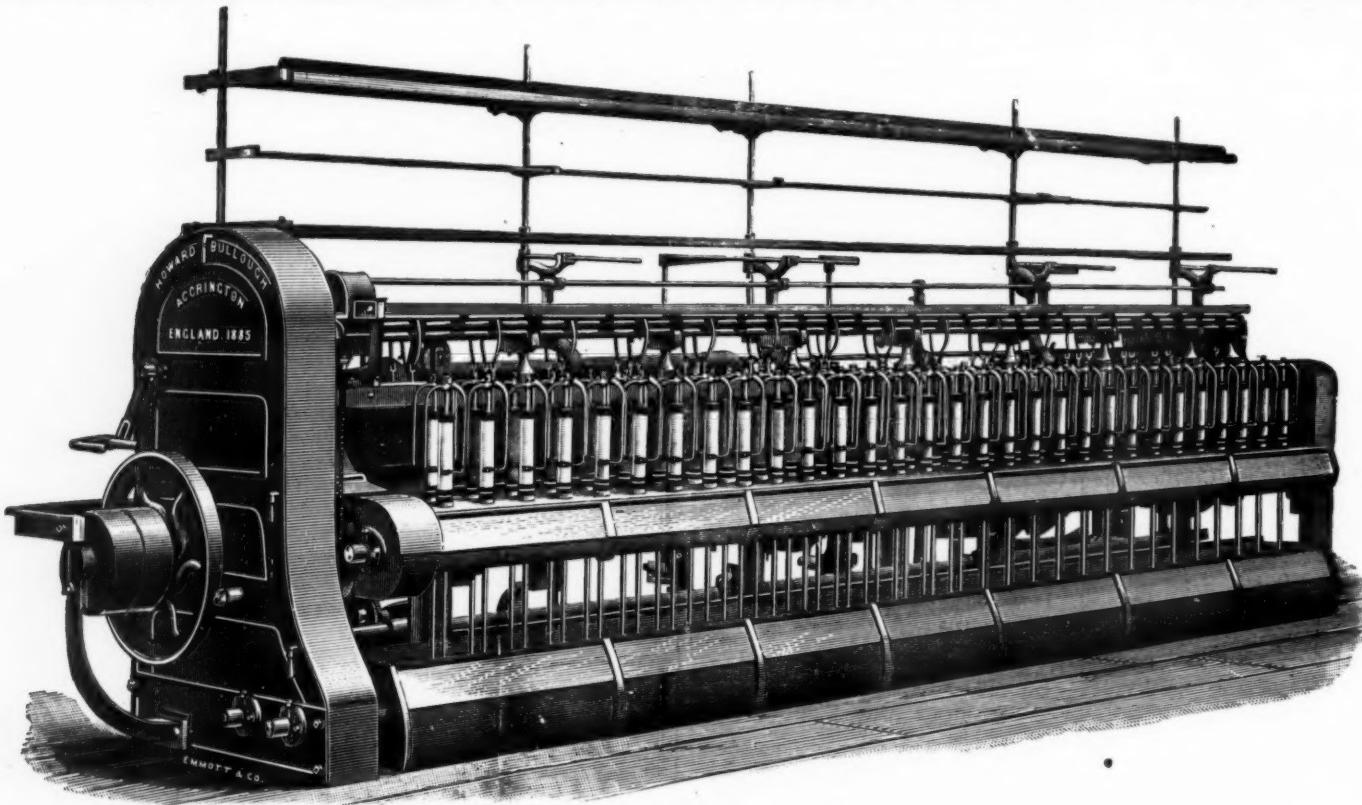


FIG. I.—IMPROVED ROVING FRAME.

rier in place of two small ones. A new patented arrangement of cone drum gives all the advantages of swinging cones without any of their evils. Both ends are raised or lowered together from front of machine. A patent locking motion secures cone in its proper working position, preventing vibration and securing an even tension of cone belt, which through an improved tightening method never needs taking up, and has very little power to exert on account of new differential motion. A new system of balancing top or bobbin rail entirely prevents the tilting forward of long bolsters after years of work, and takes all friction from the slides. The driving ends of all bobbin and spindle shafts are case hardened, and being short lengths can be easily taken out. All bobbin and spindle shafts and all roller bearings are inlaid with brass.

These several cotton machines, which are identical in principle, construction and function, and differ from each other only in the size of their parts and the number of spindles contained in each, form a very important series in cotton mill. Their function is to attenuate to the required dimension the sliver from the card after it has been equalized in the drawing frames. The slubbing and roving frames were a great

many other devices, led to the invention of the old jack-in-the-box, or jack frame, a name which has been transmitted to the far more ingenious and perfect invention of the late Mr. Henry Holdsworth, which made its public appearance in 1826, and which, until now, has been generally believed to be incapable of improvement. Just a word as to the mechanism of the old jack-in-the-box. It consisted of the revolving can as in the lantern frame, this giving the necessary twist to the rove. Inside the can a small cylinder was arranged horizontally, which was made to revolve at such a rate that its surface velocity was uniform with that of the front drawing rollers. A flanged bobbin was imposed upon it and driven by friction, a traversing guide wire upon the cylinder depositing the layers of rove evenly upon it. It will thus be seen that in this there was no differential movement at all of the bobbin. The mechanism was, however, very liable to get out of order, and consequently was unsatisfactory. In the early part of the century attempts were made, partially successful, to adopt the bobbin-and-fly frame to the production of roving, and very complex arrangements were devised, in order to solve the differential winding problem. The first frames for this purpose contained four

purpose. Though practicable it was so complex, cumbersome and destructive that it never got much beyond the stage of experimentation. The central idea, however, was taken up by Mr. Holdsworth, and after a couple of years' study he overcame all the difficulties that stood in the way by the invention of his differential system, one of the most beautiful examples of automatic equation that has ever been devised. Beyond the addition of a balance wheel this arrangement until now has not been improved upon since it left the hands of its inventor sixty years ago. This proves the great merit of the invention and the high degree of skill with which it was wrought out.

The long experience, however, which the trade has had of this arrangement, and the general progress made in other parts of the machines in which it is included, have revealed and brought into somewhat strong relief the fact that it possesses some defects which it would be an advantage to have eliminated.

To make these points clear, a brief description of Holdsworth's invention may be permitted, for which purpose we introduce an illustration showing it as now generally in use (Fig. 2).

rived from its main shaft, which has a uniform and constant revolution. A proper train of wheels drive the drawing rollers at a uniform speed; another train drive the spindles also uniformly from the wheel P upon the main shaft M. These are what we may term the constants. We have now to get at the variants, the bobbin and the mechanism which drives it. Power is taken from the main shaft through the wheel Q to the top cone drum, one of a pair, by the use of which the variant capability is brought in. From the top cone drum power is transmitted by means of a strap to the bottom cone, upon the axle or shaft of which is fixed a small pinion wheel R gearing into the sun wheel N. Upon the wheel N two lugs are cast to form bearing for the wheels L, L' through the first of which the power is transmitted to the wheel O, whilst L' is an idle or at most a balance wheel. The bevel wheel K is the main driver of the arrangement. Being fixed to the shaft and revolving with it in the direction indicated, it turns the wheel L, as marked, this again causing the bevel to which the wheel O is cast to revolve in the direction shown, which, it will be observed, is opposite to the revolution of the main shaft. The wheel N and those connected with it are necessarily

loose upon the shaft M to admit of their revolution and variable movement in the opposite direction. If the bottom cone pinion R was not moving, the rate of revolution transmitted from the bevel K through the wheel L to the bevel attached to the wheel O would be exactly equal to that of the shaft M upon which it is fixed. Thus the wheel O driving the bobbins would revolve at the same rate as the wheel P driving the spindles, only the revolution of the two wheels would be in opposite directions; and spindles and bobbins, as a consequence, would revolve exactly at the same rate, in which state no winding could take place. The power to diminish or accelerate the rate of revolution is derived, as we have traced, from the cones. As the wheel N, driven by the cone pinion R, revolves in the direction of its arrow, the speed of the wheel L and its connection, the wheel O, are accelerated in exact ratio, and thus the excess speed of the bobbin over the spindle is obtained. At the commencement of a set the bobbin must

parts, and result in a great deal of wear and tear. The part to give way is necessarily the weakest link in the chain through which the power is transmitted. This is the cone strap, and our practical foremen and managers in our mills know too well the trouble and difficulty experienced with it, caused by its frequent stretching and slipping, and the inferior work that results. Another cause of defective work arises from the necessity of the jack shaft being fixed in a position away from the center of the lift, which causes the rove to become more slack at one end of the bobbin than the other, in order to prevent which it has been necessary to arrange the winding in such a manner that the rove is often stretched in the middle of

with the lower cone drum; upon the extended boss of this wheel is cast the bevel wheel E, which gears into the bevel F. These constitute the parts of the new arrangement, the action of which is as follows: The shaft A revolves in the direction indicated by the arrow, carrying the boss G and the cross shaft around with it. If no disturbing factor interfered, all the wheels geared together would, as we have also seen in the old arrangement, revolve together, and no winding would take place, as the speed of the bobbins would be the same as that of the spindles. In this case, however, it is necessary to note that the revolutions of the various wheels are all in one direction, and thus entail no expenditure of power beyond that

the cone strap, instead of a hindrance and an obstacle, as in the older form. The greatest strain put upon the strap is no more than is required to revolve the bobbin when at its maximum speed, about 100 revolutions per minute, beyond those run by the spindles. The shaft helps to the extent of the number of revolutions it drives the spindles, the balance being the small burden of labor falling upon the cones, which is from 100 revolutions to nothing. It will be obvious that with such a light task the cone strap will almost perfectly cease to be a trouble or the cause of bad work.

The new arrangement permits the jack shaft being placed in the center of the lift, and so removing the defect in winding re-

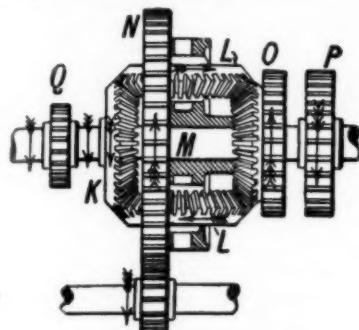


FIG. 1.—HOLDSWORTH'S DIFFERENTIAL MOTION.

run at its maximum rate, and the machine, therefore, begins its work with the cone strap upon the largest diameter of the driving cone, and upon the smallest of the driven cone. With the deposit of every layer of rove upon the bobbin the strap is traversed a little distance from the largest diameter of the top cone and each successive change until with a full bobbin the minimum diameter is reached, giving the minimum rate of revolution to the bobbin.

The waste of power and wear of parts arising from the revolution of the jack shaft, and the differential arrangement being in opposite directions, has already been pointed out.

Practical acquaintance with the above difficulties, acquired in a long experience in the construction of these machines, has induced Mr. Samuel Tweedale, a manager in Messrs. Howard & Bullough's establishment, to attempt to remove them. He has accom-

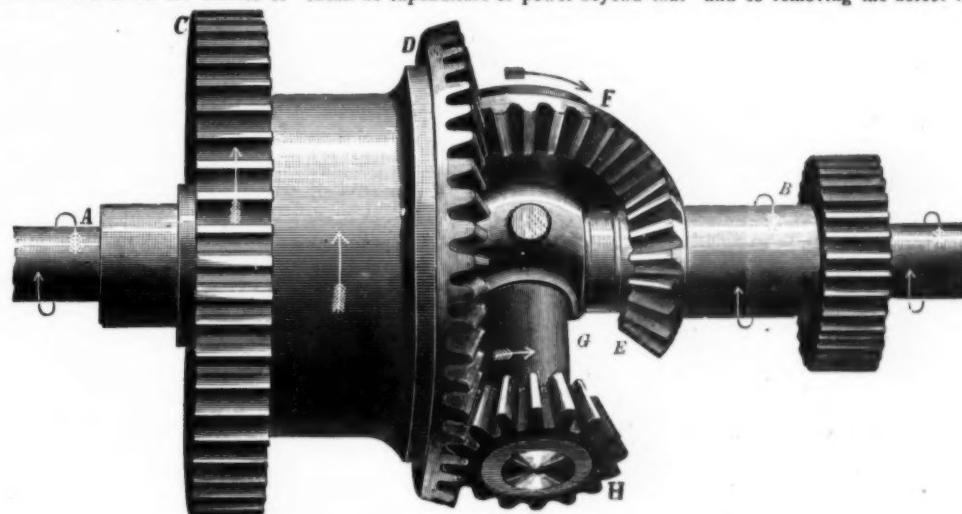


FIG. 3.—TWEEDALE'S IMPROVED DIFFERENTIAL MOTION.

required to overcome the inertia of the various parts of the machine, and to maintain them in motion. It will thus be seen that the inventor obviates the chief defect of the old arrangement, the great waste of power and the strain upon the working parts, and especially upon the cone strap. We now, however, want the winding to be performed, and in order to do this the bobbins must revolve as before, faster than the spindles. As in the previous case, the differential power

ferred to previously. Also that the wheel upon the shaft of the bottom cone drum has been constituted a change wheel, which dispenses with all the bevel change wheels upon the top and bottom of the upright shaft in the old arrangement. The new wheel, being made of the same pitch as the twist wheel, enables a considerable reduction to be made in the number of change wheels required. The cones also are speeded, and a larger twist wheel has been introduced,

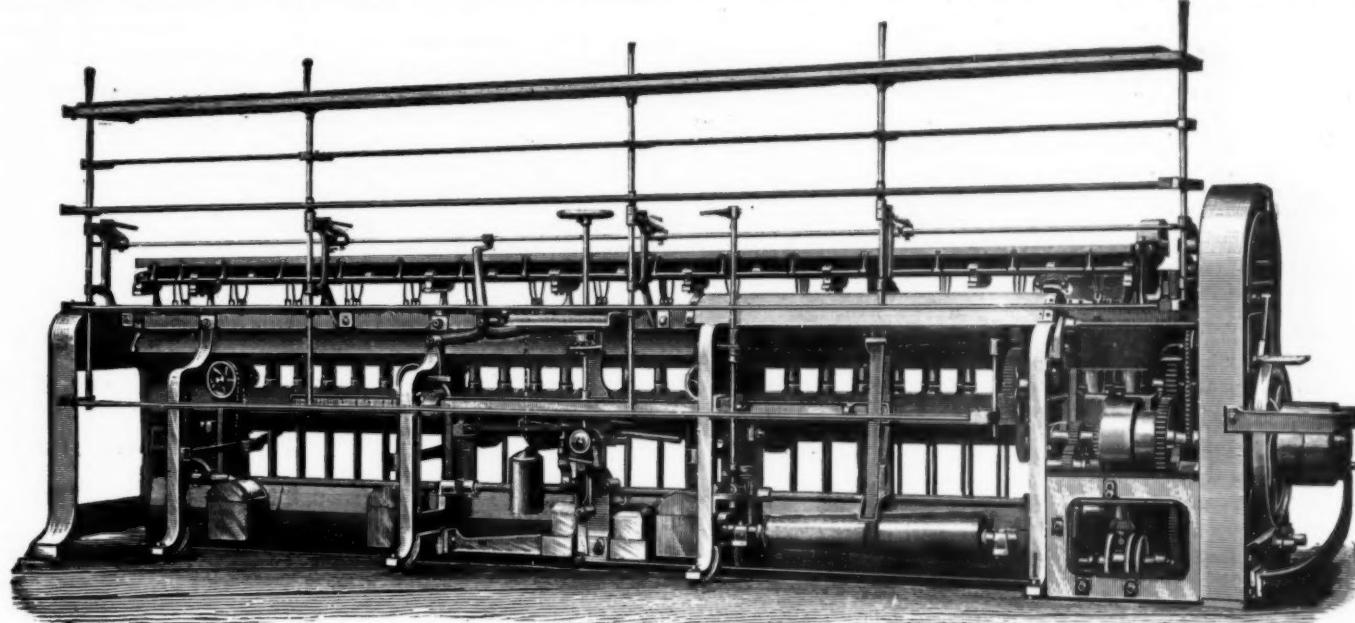


FIG. 4.—IMPROVED INTERMEDIATE AND ROVING FRAMES.

The chief defect referred to above will now be easy to discover. It lies in the fact that the whole of the differential mechanism revolves in a direction opposite to that of the shaft M upon which it is carried. If we suppose that the shaft M makes 450 revolutions per minute in the direction indicated by the arrow, and that the differential mechanism runs at the same rate in the opposite direction (as a fact it runs at a higher rate), the friction induced will be equal to that of a shaft running 900 revolutions upon a fixed bearing. This, it will be obvious, must absorb a great deal of power to overcome, exert a severe strain upon the

established this by effecting considerable modification in the construction of the apparatus, as will be evident from the following description.

NEW DIFFERENTIAL MOTION.

On the main shaft A, Fig. 3, is cast a boss or cross-piece G for the reception of, and to form a bearing for, the small cross shaft carrying the bevel wheels F, H. Loose upon the shaft A is the bell, or as it is sometimes called, the socket wheel C, which, through its connections, drives the bobbins. Attached to the wheel C is the bevel wheel D. Beyond the cross shaft, and loose upon the main shaft, is the wheel B in connection

is obtained from the cone drums, the bottom one of which, through its connections, drives the wheel B, which, through its attached bevel E working into the bevel F on the cross shaft by means of the small bevel H on its opposite extremity, accelerates through the bevel wheel D, the bell wheel C driving the bobbins. This acceleration is to the extent of the motion it derives from the cones. With the commencement of a set of course a bobbin starts at its maximum rate of revolution, whilst its rate is diminished by the shifting of the cone strap in the usual way. It will be seen that in this arrangement the revolution of the shaft A becomes a help to

which enables finer results to be obtained.

Embodying in these frames is an improved method of lifting the cone drum, by which it is locked in its working position, and all movement or vibration prevented. Connected with the same point is an improved method of tightening the cone strap, by which the frequent relaxing or buckling up of the strap is quite obviated. The cone drums, by another improvement, can now be lifted and lowered from the front of the frame previous to winding back the strap, so that there is no necessity for the minder to go round to the back, as before. This is a new and patented arrangement.

The balancing of the bobbin rail has also been improved by the introduction of a lever passing alongside the spring-piece, which enables the rail to be balanced beneath its center of gravity. This removes all tendency to tilt forward, as in the old plan, and reduces the friction upon the sides and the tendency to dwell at the changes of the traverse at both top and bottom.

A new improved and patented full bobbin stop motion has been applied, which is very effective in its action, and prevents the minder setting on the frame after the completion of a set, until doffing has taken place and the rack has been wound back. It consists of an adjustable stop or lug fixed upon the rack, which comes into contact with the bottom end of a pendant lever of a peculiar form, a projection upon which, after it has been released from its detent, passes over the top of the lug, preventing all movement until the rack has been wound back.

An improvement has been made in the cap bars and top-clearers by which each can be turned up separately. The spindle collars are now bored out through their entire length, which diminishes the risk of dirt accumulating in their inside and causing the spindles to bind. The casing-off plates, as shown in cut, are so arranged as to meet any inequality in the floor, both back and front, which helps to keep the parts clean and prevents bobbins or other matters rolling under to the risk of damage.

The following firms have lately received or ordered above machines: American Linen Co., Fall River, Mass.; Androscoggin Mills, Lewiston, Me.; Annawan Manufacturing Co., Fall River, Mass.; Athens Manufacturing Co., Athens, Ga.; California Cotton Mills Co., East Okland, Cal.; Cohanett Mills, Taunton, Mass.; Globe Yarn Mills (entire new mill), Fall River, Mass.; Granite Mills, Fall River, Mass.; King Philip Mills, Fall River, Mass.; Lawrence Manufacturing Co., Lowell, Mass.; Lonsdale Co., (entire new Ann and Hope Mill), Lonsdale, R. I.; Osborn Mills, Fall River, Mass.; Pocasset Manufacturing Co., Fall River, Mass.; W. A. Slater, Jewett City, Conn.; Tallassee Falls Manufacturing Co., Tallassee, Ala.

The patent electric stop motion for the prevention of "single" has been applied in twelve of the leading mills in New England to 6,500 intermediate spindles, and there are over 95,000 in all now working.

The electric stop motion is now applied to stubbing frames also. It has been at work for seven months at Mr. W. A. Slater's mill, Jewett City, Conn., and now three of the leading mills near Boston have ordered it, one of which is for an entire new mill.

Riley & Gray, Boston, Mass., are the sole importers of all of these machines, and will be pleased to give all information desired. They keep a large staff of fitters on this side to erect these machines, besides a large stock of parts, changes, etc.

THE Athens Mining & Manufacturing Co., of Athens, Tenn., recently organized for the purpose of developing the manufacturing interests of that place, have adopted the plan of selling property with the guarantee of the erection there of quite a number of new industries, including two cotton mills, a woolen mill, &c. This is a good move; it shows that real estate speculation is not the sole object of this company, but that its managers mean to devote their energies to the building up of Athens. In their advertisement, which appears in this issue, they offer to take stock in large or small industries, and state that large enterprises, the owners of which desire to locate in the South, will be moved to Athens at the expense of this company. This is certainly a very liberal offer, and must result in great good to the town. We commend their advertisement to the attention of our readers.

[CONTINUED FROM PAGE 403.]
Orleans, La., and the Kansas & Texas Railway Co. to build a railroad from Dallas to Fort Scott, Kan.

Dallas.—The Dallas County Alliance Building & Manufacturing Co., capital stock \$100,000, has been chartered to build a flouring mill, woolen mill, cotton mill, cotton-seed oil mill, &c. The flouring mill is to be erected first. R. F. Butler is president; J. R. Johnson, vice-president; P. S. Browder, secretary; James Garwin, treasurer, and William Harris, general manager.

Denison.—The Farmers' Alliance, of Grayson county, have decided to build their flour mill, previously reported, at Denison. The mill will cost \$50,000.

Forth Worth.—The company reported last week as being formed to start a tannery, will be formed to enlarge the tannery of Keith & Sons, started several months ago.

Fort Worth.—The Denver, Texas & Fort Worth Railroad Co., capital stock \$30,000,000, has been chartered at Denver, Col., with Sidney Dillon, of New York, as president; John Evans Derver, vice-president, and John T. Granger, secretary and treasurer. One object of the company is to build a railroad south from Fort Worth to the Gulf of Mexico.

Gainesville.—C. C. Potter, C. A. Blanton, J. H. Andrews, John T. Walker and B. S. Brooks have chartered the Gainesville Electric Light, Heat & Power Co., capital stock \$15,000.

Galveston.—A flour mill is being built on Twenty-first street.

Georgetown.—Bids for building an iron bridge will be received until May 9 by W. M. Key.

Hearne.—A company is being organized to manufacture the Brady roller cotton press. The capital stock will be \$150,000.

Houston.—John F. Dickson will erect a car wheel foundry. He has bought some machinery.

Laredo.—The Mexican National Railway Co. will build machine shops. Have secured a location.

Lampasas.—The Lampasas Hotel & Park Co., capital stock \$100,000, has been incorporated by W. H. Mills, George Sealy and others.

Lewisville.—A company is being formed to build a \$20,000 flour mill.

Longview.—The Galveston, Sabine & St. Louis Railway Co. will extend their railroad.

Marshall.—The Texas & Pacific Railroad Co. (office, Dallas,) will add machinery to their shops to build their own locomotives.

McKinney.—The object of the McKinney Oil Works, reported last week as incorporated by B. Adoue, J. L. Kane and Joseph Lobit, of Galveston, is to operate the Collin County Oil Works.

Navasota.—A \$50,000 stock company has been organized to erect a cotton compress.

Nacogdoches.—Hitchcock & Wallace are boring for oil about 15 miles from Nacogdoches.

Paris.—The Marshall, Paris & Northwestern Railroad Co. has been reorganized with John Martin as president; S. J. Wright, first vice-president; W. W. Heartsell, second vice-president and general manager, and E. J. Fry, secretary and treasurer. The company will complete their road to Marshall at once, and extend it to Sabine Pass.

Paris.—B. J. Baldwin, Jr., W. R. Harle and E. S. Easley have chartered the Paris Land Co., capital stock \$200,000.

Santa Anna.—The machinery has been received for the large roller flour mill previously reported to be built.

San Antonio.—The San Antonio Foundry Co., capital stock \$150,000, has been incorporated by G. M. Dilley, G. E. Dilley and B. F. Oakum.

San Antonio.—Bexar county will build a new court house to cost about \$100,000.

Texarkana.—The capital stock of the Matthews Lumber Co., reported last week as incorporated, by H. S. Matthews and others, is \$150,000. The company is negotiating for 30,000 acres of timber lands and will probably build several large lumber mills.

Tyler.—A tannery has been started lately. Waxahachie.—An ice factory will probably be built.

Whitewright.—The Farmers' Alliance have recently held a meeting to consider erecting a large roller flour mill.

VIRGINIA.

Alexandria.—The Norton Life & Naval Construction & Ship Building Co. are preparing to resume work at their yards.

Buchanan.—Arrangements are being made to develop a mineral paint mine.

Charlottesville.—New machinery will probably be put in the Charlottesville Gas Works.

Haymakertown.—Ross & Rice will start a canning factory.

Ivanhoe Furnace.—The New River Mineral Co. will change their charcoal furnace to a coke furnace of 75 tons capacity.

Daleville.—E. G. Nininger will start a canning factory.

Lynchburg.—John Reichle has started a basket factory on a small scale.

Lynchburg.—The Lynchburg Co-operative Broom & Brush Co. will double the capacity of their factory, recently started.

Newport News.—The Methodists will build a \$10,000 church.

Onancock.—B. F. Parker will build a hotel.

Pleasant Valley.—E. Shifflet is building a mill.

Roanoke.—The Roanoke Electric Light & Manufacturing Co. has been organized with Henry Fairfax, of Aldie, as president, and George R. W. Ames, of Philadelphia, Pa., secretary and treasurer. The capital stock is to be not less than \$50,000 nor more than \$1,000,000.

Troutville.—A canning factory will be established by Samuel Shaver.

WEST VIRGINIA.

Bayard (P. O. Elkins, Md.).—A coal mine is being developed by James P. Rees, of Rees Tannery.

Charleston.—The Kanawha & Richmond Railroad Co. previously reported, have organized with W. S. Edwards as president; Emmons Blaine, first vice-president, and D. E. Pechin, second vice-president. The object of the company is to build a railroad from near Charleston to the Norfolk & Western Railroad in Mercer county.

Charleston.—The Kanawha Woolen Mills are putting in eight new looms and large new boilers.

Charleston.—Kanawha county will shortly decide by popular vote whether or not to spend about \$150,000 in building a new court-house and jail.

Echo.—It is stated that M. T. Davis will start coke works near Echo.

Elizabeth.—M. R. Louther, Z. E. Thorn and others will, it is said, build the flour mill referred to last week.

Fairmount.—P. H. Bennett has received the contract to build 10 miles of railroad.

Hinton.—The city has decided by a popular vote to issue \$10,000 of bonds to build water works.

Parkersburg.—C. H. Shattuck, A. G. Jackson, William H. Wolf, S. S. Stone and others have formed a company to bore for natural gas and oil.

BURNED.

Birmingham, Ala.—The planing mill of R. J. Miles & Co.; loss on mill and machinery about \$5,000.

Cairo, Ga.—The saw mill of Dekle & Butler. Will be rebuilt at once.

Dancyville, Tenn.—The mill of William Moore.

Fayette county, Ga.—The saw mill of W. J. Bridges; loss \$2,000.

Fort Worth, Texas.—The candy factory of Capera Bros.

Greenville, N. C.—The grist mill and gin of M. P. Wilson, one mile from Greenville; loss \$20,000.

Marcella Falls, Tenn.—The tannery of Claxton & Renfro.

Nashville, Tenn.—The saw mill of A. G. Ewing, near Nashville, reported as burned.

Pelham, Ga.—The gin of Daniel Purce.

Pittboro, N. C.—Bland's mill, near Pittsboro.

Sumter, S. C.—The large lumber mills of Mallett Bros., 6 miles from Sumter. Will probably be rebuilt.

Wheaton, Ga.—The saw mill of W. S. Hawkins; loss about \$10,000.

Wheeling, W. Va.—The box and bung factory of Hale & Stalnaker, on South street; loss \$20,000.

To Build a 100-Ton Furnace.

CEDARTOWN, GA., April 9, 1887.

Editor Manufacturers' Record:

The Cherokee Iron Co. will commence at an early date the erection of a 100-ton coke furnace within corporate limits of Cedartown. This furnace is to be built by present owners of the Cherokee Iron Furnace, together with several other capitalists of New York. The same parties speak of also erecting here large rolling mills, but have not definitely settled this matter. Our company is also endeavoring to perfect arrangements to construct an iron furnace, but we do not desire yet to make the announcement positively. The Hon. W. D. Kelly, of Pennsylvania, is now visiting our town, and he expresses himself as highly pleased with the large deposits of iron and manganese ores found in Polk county. He says that our slate quarries remind him very much of those found in Lehigh county, Pa.

CHEROKEE LAND & IMPROVEMENT CO.,
A. RICHARDSON, Sec'y.

Two More Furnaces for Bessemer.

BIRMINGHAM, ALA., April 14, 1887.

Editor Manufacturers' Record:

We have purchased fifty thousand acres more land in what is known as Murphree's Valley, and contractors are at work building the Bessemer & Huntsville R. R. through this property. We will haul ore and coal from this valley to Bessemer where we are going to build two more furnaces. Contracts have been given for same.

H. F. DEBARDELEBEN.

To Build Large Lumber Mills.

AMERICUS, GA., April 13, 1887.

Editor Manufacturers' Record:

The promoters of our company have applied for a charter, over \$80,000 of the proposed \$100,000 being subscribed. They propose to erect large mills along the line of the Americus, Preston & Lumpkin R. R. through pine belts in Dooly and Wilcox counties to develop lumber interest. Head office will be in Americus.

AMERICUS LAND & LUMBER CO.
H. C. BAYLEY.

Erecting 15-Ton Ice Factory.

FREDERICK, MD., April 15, 1887.

Editor Manufacturers' Record:

Our factory and cold storage warehouse will be ready for business by May 1, 1887. We may get to making ice before that time. The machinery is being placed in position now; is a 15-ton plant and is being built by the Frick Company of Waynesboro, Franklin Co., Pa. BROWN & DeLASHMITT.

To Build a Cotton Factory.

JACKSON, TENN., April 16, 1887.

Editor Manufacturers' Record:

It is our purpose to establish a \$100,000 cotton mill in time for the crop of the coming season. Several sites have been offered to be donated, of from 2 to 3½ acres. About \$26,000 in subscriptions have been raised at this writing. It is our purpose to raise \$50,000 at home and secure \$50,000 in the North. We would like to correspond with any Northern capitalists who would like to invest in the enterprise. There is no doubt now but that the mill will be built, and it is bound to pay if there is anything in manufacturing cotton goods. J. M. SIMMONS.

Gas Works and an Electric Light Plant to be Built.

WINSTON, N. C., April 12, 1887.

Editor Manufacturers' Record:

Our twin city, Winston and Salem, N. C., is not on what some of our Southern towns call a boom (mushroom), but we are just going steadily along improving year by year. An electric light company has been organized with a capital stock of \$30,000, composed of our own citizens, styled the Winston Electric Light & Motive Power Co. Judge D. H. Starbuck, president; Capt. D. P. Most, secretary and treasurer. The company have adopted the Brush light. The same company will at an early day erect gas works. In less than ninety days work will be commenced on two railroads, running from our towns to the rich coal beds of Tennessee. Mr. John T. Moore, of Havre de Grace, Md., contemplates putting down a plant soon for an ice factory at an early day. SAML. H. SMITH.

Electric Light Plant to be Erected.

TALLADEGA, ALA., April 15, 1887.

Editor Manufacturers' Record:

A company composed of reliable and substantial citizens has been organized with a capital of \$20,000, and preliminary steps taken to secure a charter, &c., for an electric light plant. R. R. HUNLEY.

Erecting a Spoke Factory.

CALERA, ALA., April 13, 1887.

Editor Manufacturers' Record:

We have our building in course of construction. Machinery is ordered and we are getting out timbers right along, the same being placed on the grounds. T. M. HENDERSON.

Water Works to be Built.

BATON ROUGE, LA., April 12, 1887.

Editor Manufacturers' Record:

Our city has contracted for water works with C. A. Lamb and H. S. Raymond of Chicago, Ill. G. L. VAY.

LOUISVILLE, Ky., April 15, 1887.*Editor Manufacturers' Record:*

There will be a M. E. Church built here, to be known as the Fourth Avenue M. E. Church. The cost of the building when completed will be about \$75,000. The rear portion, embracing the Sunday-school, class rooms, infant class rooms, and lecture room, will be built this summer. The cost will be about \$20,000. Contracts have been let for a portion of the work. C. J. CLARKE.

A Natural Gas Company.

FLEMINGSBURG, KY., April 14, 1887.

Editor Manufacturers' Record:

A gas company has been organized here under the style of Flemingsburg Natural Gas Co. Capital stock \$30,000. Shares \$10. Stock subscribed to 300 shares; to commence work immediately with every prospect of a grand success. H. C. ASHTON.

Information as to Machinery Wanted.

COLUMBIA, S. C., April 14, 1887.

Editor Manufacturers' Record:

We want to buy machinery for making cotton into bats, with a capacity of 3,000 to 5,000 lbs. per diem. What size engine is required, and who are manufacturers of such machinery? MCMASTER & GIBBES.

To Erect an Agricultural Implement Factory.

MACON, GA., April 16, 1887.

Editor Manufacturers' Record:

I have sold a company one acre, for building thereon an agricultural implement factory. They propose to manufacture steel ploughs, wood buckets of all kinds, hames, ax handles, &c. I would give you the names but am not at liberty just now to do so. W. H. WHITEHEAD.

Enlarging Capacity.

CHATTANOOGA, TENN., April 15, 1887.

Editor Manufacturers' Record:

We are enlarging our capacity to 15,000 cans per day. For that purpose are erecting additional buildings. The improvements will cost about \$3,500.

CHATTANOOGA CANNING CO.

SAVANNAH, GA., April 13, 1887.

Editor Manufacturers' Record:

We are to introduce the Westinghouse system of incandescent lights, and have ordered a 70-horse-power engine and 80-horse-power boiler from the Ball Engine Co. BRUSH ELECTRIC LIGHT & POWER CO.

WHEELING, W. VA., April 11, 1887.

Editor Manufacturers' Record:

A company is organizing for the manufacture of sewer pipe and fire brick. H. STERLING.

NACOGDOCHES, TEXAS, April 12, 1887.

Editor Manufacturers' Record:

Messrs. Hitchcock & Wallace are boring for oil 15 or 18 miles east from this place. The indications for oil are good. Nacogdoches is building a \$11,995 court-house. CLIFTON WELLS.

RALEIGH, N. C., April 15, 1887.

Editor Manufacturers' Record:

We have erected a mill for sawing shingles, sawing wood for fuel and grinding stock feed. JONES & POWELL.

Building Roller Corn Mill.

FAYETTEVILLE, N. C., April 18, 1887.

Editor Manufacturers' Record:

We are now building a roller corn mill of 3,000 bushels capacity per week. E. G. STYRON & CO.

Enlarging Gas Works.

SANFORD, FLA., April 11, 1887.

Editor Manufacturers' Record:

The Sanford Light & Fuel Co. are at present putting in an extra setting of gas apparatus of double the capacity of set of apparatus put in last winter, the business having increased beyond the expectation of the company. About \$1,800 will cover the cost of the improvements now going on. The water company here are going to increase their facilities also shortly. E. B. KNIGHT, Genl. Man.

GREENVILLE, ALA., April 14, 1887.

Editor Manufacturers' Record:

Mr. W. J. Dunklin proposes to build a bucket and hollow-ware factory in this city during the summer. We have immense quantities of red cedar near here, and millions of feet in square logs are shipped from this depot. J. B. STANLEY.

New Mining Companies.

GOLDEN CITY, LOGAN CO., ARK., April 14, 1887.

Editor Manufacturers' Record:

The placers here are the richest discovered for years, and the veins, which are true fissures, are the most extensive I ever saw. The New Golden Era Lode, located for 12 miles, is very rich, yielding by amalgamation 2 ounces gold at the grass roots. The San Pedro Mining & Milling Co., Emily Mining Co., Sylph Mining Co., and the Arlington are new companies, whilst my company is the oldest, largest, and control more valuable property than all the rest. Our postoffice at present is Boonville, but we expect ours daily. JAY GUY LEWIS, Supt.

Improvements in a Louisiana Town.

LAKE CHARLES, LA., April 16, 1887.

Editor Manufacturers' Record:

Can you give me the address of parties who buy "shuttle blocks" in the rough? I learn a large business is done in North Carolina, Virginia, &c., in these. We have dogwood and ironwood and I would start a factory if I knew where to market the products. A chair factory is soon to be built here by Cincinnati parties who have bought property on our lake front for that purpose. Our yellow pine lumber trade is increasing all the time; market principally in Texas. New railroad companies rushing the mills with orders for material. Our section and town grows all the time, filling up with intelligent, thrifty people. We produce lumber, hay, fruit (peaches, figs, strawberries, &c.), in large quantities. Our parish has standing in it over 4,200,000,000 feet long leaf yellow pine, while more than half of the parish is open prairie, fit for grazing, hay and rice growing and general farming purposes. Open lands can be bought very cheap, while in timber there are a few large tracts on the market at about \$5.00 per acre. We have a fine country, which only needs more capital and men to develop it. I send you these few words knowing your great interest in the development of the whole South.

J. L. WILLIAMS.

GALVESTON, TEXAS, April 16, 1887.

Editor Manufacturers' Record:

We have lately obtained a charter for the McKinney Oil Works, for the purpose of operating the mill now located at that town formerly belonging to the Collin County Oil Works, which was sold by sheriff ten days ago. B. ADOUE.

CENTER, TEXAS, April 13, 1887.

Editor Manufacturers' Record:

The Sabine River Railway Co. is a local company, organized to build a railroad from Center, Texas, to Loganport, La., a distance of 17 miles. The capital stock is \$76,000. Company organized March 1, 1887, with the following officers: E. S. Hides, president; A. R. Chandlar, vice-president; E. H. Hearne, treasurer; A. W. Oliver, secretary. X.

Machinery Wanted.

MILLEDGEVILLE, GA., April 18, 1887.

Editor Manufacturers' Record:

Mr. L. H. Andrews, of our city, would be pleased to be put in correspondence with manufacturers or dealers of machinery needed in making brooms. J. W. McMILLEN.

Machinery for Canning Factory Wanted.

MT. PLEASANT, S. C., April 17, 1887.

Editor Manufacturers' Record:

Please put me into communication with some manufacturers of machinery for canning goods, especially of the patent kettle process. The Mount Pleasant Canning Manufactury, a stock company, has been formed at Mt. Pleasant, opposite Charleston, S. C., with a capital of \$10,000, for canning vegetables, fruits and fish. Shall begin operations at once. Would feel obliged for communications from can, glass and engine manufacturers. J. H. PATJENS.

To Build a Rolling Mill.

SELMA, ALA., April 16, 1887.

Editor Manufacturers' Record:

A rolling mill company has been organized here to put up a mill to roll merchant bar iron. I would like to correspond with some one to act in the capacity of superintendent for same, and in erection of plant. Must have reference as to capacity.

EDW. G. GREGORY.

To Bore for Natural Gas.

OWENSBORO, KY., April 12, 1887.

Editor Manufacturers' Record:

Myself, together with J. D. Powers, R. R. Hathway and others, have formed a company to bore for natural gas, etc., in this immediate vicinity. A. C. TOMPKINS.

MARSHALL, TEXAS, April 10, 1887.

Editor Manufacturers' Record:

We have arranged for the erection of six stall round-house, iron turn-table, repair shops, coal bins and coal chutes at a place now called Wheelock, a freight division point, located $1\frac{1}{2}$ miles east of Maringould.

TEXAS & PACIFIC RAILROAD,
E. A. GARVEY, Chief Eng.**To Build an 80-Mile Railroad.**

FORT SMITH, ARK., April 11, 1887.

Editor Manufacturers' Record:

We have organized and propose to build the Fort Smith, Paris & Dardanelle Railway, distance 80 miles, through a thickly settled country, rich in soil, coal, minerals and forest timber.

THOMAS BOLES, President.

New Tobacco Factory.

DURHAM, N. C., April 11, 1887.

Editor Manufacturers' Record:

My new factory is just completed, and I have moved into it. It is brick, 40x80 feet, three stories high, built especially for the manufacture of plug tobacco, and is a model factory. JAMES T. WHITTED.

Erecting Foundry and Machine Works.

BIRMINGHAM, ALA., April 12, 1887.

Editor Manufacturers' Record:

The Bessemer Foundry & Machine Works are breaking ground. The capital is \$25,000. Bessemer Brick Works are making brick by machinery. Their capital is \$10,000. The general manager is A. R. Megrue. H. F. DE BARDELEBEN.

To Build a \$100,000 Hotel.

WACO, TEXAS, April 8, 1887.

Editor Manufacturers' Record:

Myself and others have organized to build a hotel at this place, and our purpose is to put up a building costing not less than \$100,000. GEO. CLARK.

ASHEVILLE, N. C., April 13, 1887.

Editor Manufacturers' Record:

The Atlanta, Asheville & Baltimore Railroad Co. was organized at this place on the 8th inst., with Natt Atkinson as president; G. D. Ray, vice-president, and J. G. Rankin, secretary and treasurer. We are hopeful of having the road built. NATT ATKINSON.

To Build a Rolling Mill.

SELMA, ALA., April 15, 1887.

Editor Manufacturers' Record:

The Rolling Mill & Chain Works Co. has been organized; capital \$50,000. C. L. Howard is president, and the directors are Geo. O. Baker, E. G. Gregory, R. M. Nelson, C. C. Tyler, A. M. Faulks and W. C. Culverhouse. Five acres of land has been donated by the Selma Land, Improvement & Furnace Co., and work will commence at once. Company organized April 14.

EWD. G. GREGORY.

New Machinery.

CHARLESTON, W. VA., April 17, 1887.

Editor Manufacturers' Record:

We are putting in eight new looms for flannels and shirtings, and new and larger boilers. KANAWHA WOOLEN MILLS.

Erecting a Cotton Compress.

BAYOU SARA, LA., April 15, 1887.

Editor Manufacturers' Record:

A compress is in course of construction, and will be finished by September 1; capacity 800 bales per day. We have contracted for a Morse compress.

BAYOU SARA COMPRESS CO.

MORRIS WOLF, Pres.

To Build a Street Railroad.

NASHVILLE, TENN., April 16, 1887.

Editor Manufacturers' Record:

A charter of incorporation has been granted to John A. McEwin, John Lillyett, L. A. Robinson, W. H. Lanier, L. A. Dickinson, Dr. Wm. Morrow and W. D. Haggard to build a dummy street railway in and from the city. It now depends on and awaits grant of rights of way. I suppose these will be obtained in about a month, and work be proceeded with.

JOHN LILLYETT.

To Build a Paint Mill.

GADSDEN, ALA., April 16, 1887.

Editor Manufacturers' Record:

There has been a stock company formed for the purpose of building a paint mill at Gadsden; capacity eight tons per day; capital \$10,000. Mill to be built at once.

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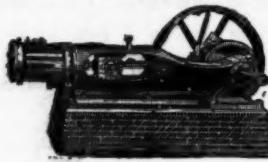
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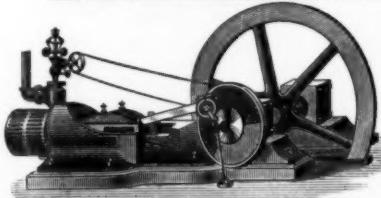
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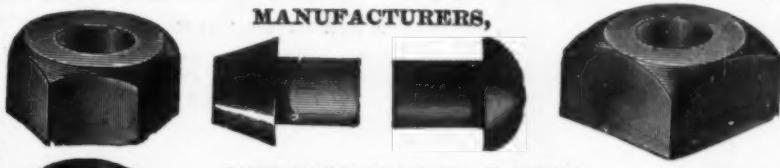
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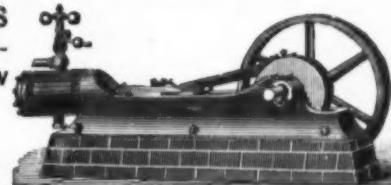
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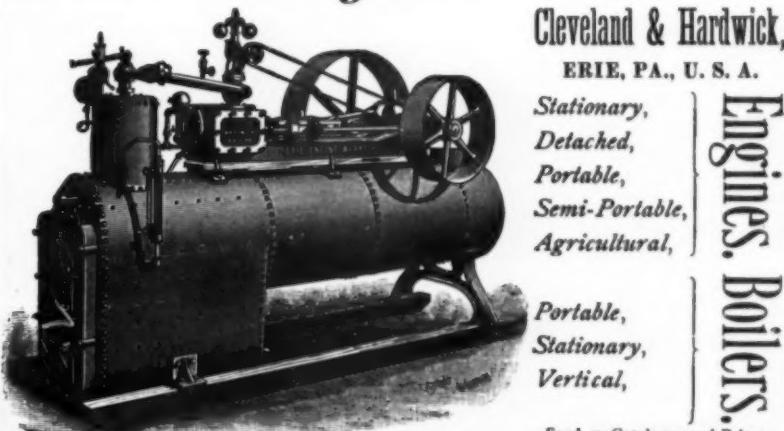
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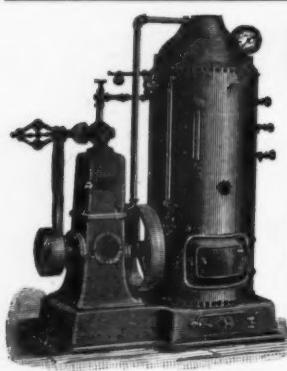
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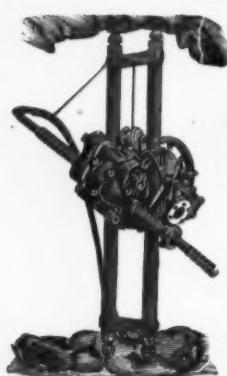
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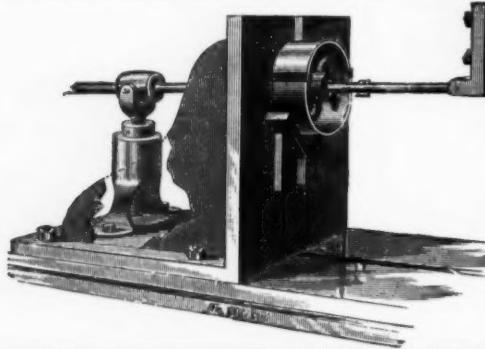


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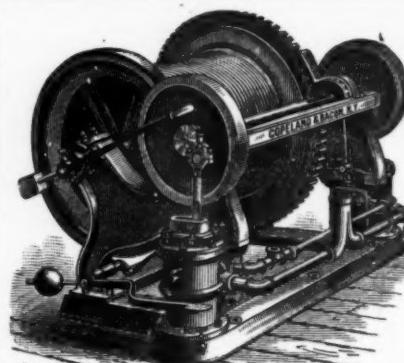
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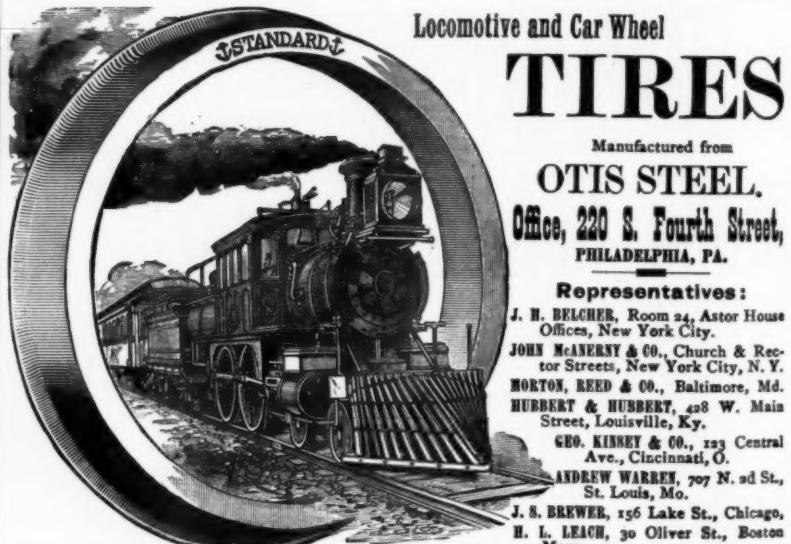
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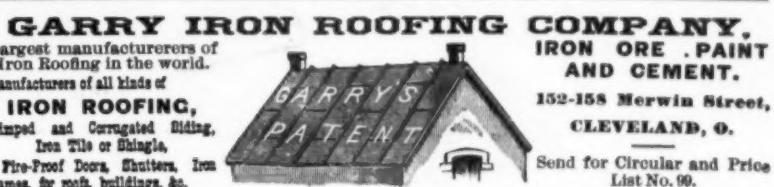
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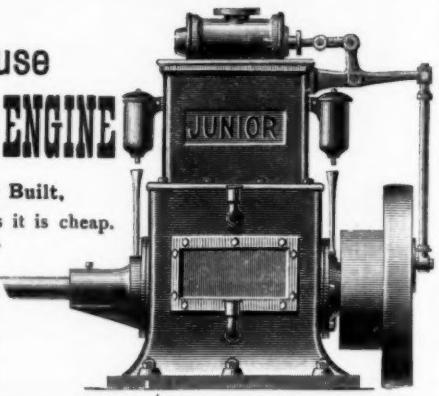
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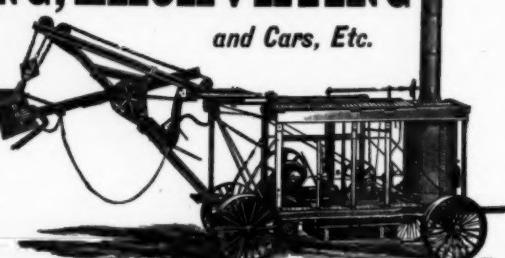
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LAWSON & BRENNER,	Blinds, Spring Hinges, &c.
HOLROYD & CO.	Forks.
BAKER CHAIN & WAGON IRON MFG. CO.	Stocks and Dies.
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Office, No. 14 W. German Street,

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Covert

Manuf'g Company

WEST TROY, N. Y.



Manufacturers of COVERT'S Celebrated Harness Snaps, Swivel Snaps, Open Eye Bit and Chain Snaps, Snap and Thimble for Horse and Cattle Ties; ROPE GOODS, consisting of Web and Rope, Halters, Rope Horse and Cattle Ties, Web Horse Ties, Halter Leads, Driving Reins, Weight Cords, Hammock Ropes, Hitching Cords, Larri Tethers and Picket Pins. Also, Leather Horse Ties, Etc. Breast Chains, Heel Chains, Chain Cow Ties, Halter Chains, Martingale Chains, Rein Chains, Post Chains, Butt Chains, Back or Cart Chains, Log Chains, Stake Chains, Trace Chains. Also, STUD, CABIE AND COIL CHAIN. CHAINS OF ALL KINDS MADE FROM SAMPLE OR DRAWING.

PATENT ADJUSTABLE SOLDERING IRONS.

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—Cleveland, Ohio,—

MANUFACTURERS OF

INCREASE TWIST DRILLS, Etc.,

TAPER SHANK DRILLS,

Straight Shank Drills,

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TWIST DRILL GRINDING MACHINE.

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For Sale

THE

TUSCALOOSA

Cotton Mills

TUSCALOOSA,

ALABAMA.

Desiring a change of business on account of the health of my son, who is superintendent, I offer a

Rare Chance for Investment to Capitalists.

This mill was organized under the general incorporation law of Alabama in 1879, with a capital of \$40,000. Most of its earnings have been invested in enlarging and improving the mill. It has a 125-Horse-Power Engine, made three years ago by William Wright, Newburgh, N. Y., and Two First-Class Steel Boilers, five feet in diameter, sixteen feet long, with forty-six 4-inch flues in each, made last year by Webb & Co., of Chattanooga.

172 THOMAS WOODS' LOOMS

and all necessary machinery, by which its widely-known and justly-celebrated

"Black Warrior Plaids"

are manufactured. With a full line of first-class customers its production is sold several months ahead. *The Buildings Alone Cost Over \$25,000*, and the Company owns five lots in the rapidly growing city of Tuscaloosa.

The Entire Property of the Company is Exempt from Municipal Taxes for Twelve years.

It has \$70,000 of assets over and above its liabilities, placing buildings and grounds at the low valuation of \$18,000.

I offer 382 shares of the original 400 shares of this Company for \$90,000, half cash, balance in one and two years with 8 per cent. interest, secured by mortgage on the property, and will guarantee it will make and pay a dividend this year of 15 per cent. on the purchase money.

Parties desiring to purchase are invited to inspect the property, and will be requested to examine the books of the Company that they may fully understand the fine opportunity here presented for Manufacturing Cotton Plaids in the South.

J. H. FITTS.

TUSCALOOSA, ALA., March 28, 1887.

A Big Chance

—THE—

**Canton Cotton Factory,
CANTON, MISS.,**

Is Offered for Sale at

\$18,000

This factory is situated on the line of the Illinois Central Railroad, one mile north of the city of Canton, Miss., in a splendid cotton region, good water supply, cheap fuel (wood and Alabama coal) and abundant labor. The factory is equally well adapted for a WOOLEN MILL OR COTTON-SEED OIL MILL. The property consists of 28½ acres of land, running parallel to the Railroad, and adjacent to it. The factory building is in the center of the tract, one hundred yards from the railroad, is a brick building, substantially built, 200x90 feet, two stories high, brick chimney stack 75 feet high. The factory contains ONE ENGINE, 200 HORSE-POWER; TWO LAPPERS; A CONSIDERABLE QUANTITY OF SHAFTING AND PULLEYS. There is a double dwelling house on the property. The climate healthy. Manufacturing in Mississippi is exempt from taxation. The property has been paid for in full by the owner; it is unencumbered. The building alone cost \$40,000. This is a magnificent opportunity to engage in cotton manufacturing in the South. For full particulars, address

D. ESTE REYNOLDS,

Care MANUFACTURERS' RECORD, Baltimore.

THE AMERICAN CONTRACTOR.

A BUREAU OF INFORMATION.

THE ONLY PUBLICATION OF ITS KIND.

The object of this publication is to furnish information in advance of contracts, to Architects, Builders, Contractors, Decorators, Painters, Roofers, Manufacturers, Producers, Investors, Bankers, Plumbers, Gas Filters, Sewer Builders, Bridge Builders, Insurance Men, Real Estate Men, Lumbermen, Foundrymen, Hardware Men, Iron Men, Railroad Men, Supplymen, Etc.

No one of the above named can afford to do without this Advance Information.

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BY

B. EDWARDS & CO.,
Times Building, Chicago, Ill.

We have an able corps of Editors, Special Correspondents and Reporters throughout the U. S. and Canada; receive news daily by letter or wire, and besides, we receive daily about 1,000 papers; those alone are valued at over \$20,000 per annum.

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Sample Copy, 3 or 4 weeks old, free.

Were it not for our valuable advertising space the price of this publication would be \$50.

ROOT'S NEW IRON BLOWER,

POSITIVE BLAST.

IRON REVOLVERS,

PERFECTLY BALANCED.

Has fewer parts than any other Blower. Also, Blacksmith Blowers, Portable Forges, Tuyere Irons, and Gas Exhausters.

P. H. & F. M. ROOTS, Manufacturers,

CONNERSVILLE, IND.

Send for Priced Catalogue.

No. 7 CANAL STREET.

The Brunswick Lands Improvement & Colonization Co.

Subscription Books for the Capital Stock of this Company are now open

At the Offices of the Company, Brunswick, Ga., and at (Room 20) 229 Broadway, N. Y.; (Room 4) 85 Devonshire Street, Boston, Mass., and other Branch Offices of the Company until the 1st day of August, 1887.

The Company is formed under and by virtue of a Charter granted June 19, 1886, to ANDREW J. ROGERS, JAMES M. OLMSTEAD, HENRY S. WELLES, DANIEL W. CLARK, GEORGE E. SMITH, JOHN E. SAUNDERS, and FREDERICK G. BRUNEL, and their associates, in accordance with the Laws of the State of Georgia, to run for twenty years, with the right of renewal, and authorizing a Capital Stock of \$100,000, in shares of \$50 each, with power to increase the same at any time to any amount not exceeding \$10,000,000, payable in either money, or real or personal property that may be utilized in the business of the Company. The Charter is, by comity of the States, made operative throughout the entire country.

THE PRELIMINARY ORGANIZATION

Has been duly effected by electing the following named

OFFICERS.

ANDREW J. ROGERS, Pres. JAMES M. OLMSTEAD, Vice-Pres. GEO. E. SMITH, Sec. FRED'K G. BRUNEL, Treas.

DIRECTORS.

A. J. ROGERS, Brunswick, Ga., and 227 W. 10th St., New York.
JAMES M. OLMSTEAD, 85 Devonshire St., Boston, Mass.
HENRY S. WELLES, 229 Broadway, New York.
GEORGE E. SMITH, 32 Broadway, New York.

FREDERIC G. BRUNEL, Grand Union Hotel, New York.
JOHN E. SAUNDERS, Nashville, Tennessee.
DANIEL W. CLARK, 11 Winthrop Street, Hartford, Conn.
WILLIAM B. BURRCUGHS, Brunswick, Ga.

EXECUTIVE COMMITTEE.

ANDREW J. ROGERS,

HENRY S. WELLES,

FREDERICK G. BRUNEL,

WILLIAM B. BURROUGHS.

The said Officers and Directors to hold over until the First Meeting of the Stockholders.

INCREASE OF THE CAPITAL STOCK.

In order to promptly acquire ample areas of Land and Harbor Water frontage, for colonization, wharfing and other purposes, as well as obtaining sufficient funds for carrying out the several objects of the Company, the Directors have duly voted an increase of the Capital Stock from \$100,000 to \$3,000,000, payable in either money or in any real or personal property that may be utilized in the business of the Company, (as provided in the charter,) and have authorized the opening of Subscription Books for said \$3,000,000 of Capital Stock.

EUROPEAN CO-OPERATION.

The President of the Company has perfected arrangements with competent European parties whereby they agree to subscribe, or cause to be subscribed, two-thirds of said \$3,000,000 of Capital Stock, provided the other one-third of said Stock is duly subscribed in America, and to pay in \$200,000 for every \$100,000 thereof that shall have been so subscribed in America and paid into the treasury of the Company.

TRANS-ATLANTIC STEAMSHIP LINE.

The President of the Company has also arranged with competent European ship owners for promptly putting on and maintaining a Trans-Atlantic Steamship Line between the port of Brunswick, Ga., and ports in the United Kingdom; said line to comprise a fleet capable of doing all the trans-Atlantic shipping business of the Company, and to be put on as soon as the Company announces itself ready with freights, etc., for trans-Atlantic shipment.

THE GENERAL ENTERPRISE

Comprises the building up and maintaining an extensive domestic and foreign trade at and through the city and port of Brunswick, Ga., and corresponding ports, and engaging in a general system of Lands Improvement, particularly including the building up, extending and beautifying the city and suburbs, and improving and perfecting the Harbor of Brunswick for maritime commerce, and generally aiding in developing the agricultural, mineral and other natural resources of, and settling the surrounding districts and corresponding sections of the interior, with the view to participating in the general benefits and increase in value of properties accruing from such developments and improvements, and to inaugurate and conduct

BUREAUS OF COLONIZATION AND INDUSTRY

As special departments of the General enterprise for commercially engaging in such systems of Colonization and Cooperative Industries as will, from time to time, aid in relieving the Labor Markets of all surplus artisans and other workers, including the worthy, able bodied indigent classes, by drawing them off and settling or aiding them in settling and getting fairly started on alternate lots of the Company's Lands, in suitable rural and growing village districts, or so employing or aiding them to find such suitable employment as will make them reciprocally useful to the Company and ensure their becoming self-sustaining and prosperous constituents of the commonwealth, and finally reimbursing the Company with fair profits for all such assistance, thus materially aiding in freeing society of its worthy, able-bodied, destitute and suffering industrial classes by reclaiming them from all anarchical tendencies, and thence through their own prosperity readjusting them as good, law-abiding and patriotic citizens of the Commonwealth.

THE COMMERCIAL DEPARTMENT.

With the foregoing objects in view, the Company will engage in the following enterprises, taking them up and carrying them forward in such business order as will ensure the prosperity of every department of the General Undertakings, beginning with The Commercial Department proper, it being the only medium through which the more benevolent and humane purposes can be successfully carried into effect with profit to the Company. The Directors are already assured of a large paying business from the commencement of active operations in the following specified enterprises, in which the Company will be constantly turning over its funds and realizing from 5 per cent. upwards of net profits every sixty or ninety days. Viz: A General

TRANS-ATLANTIC AND COASTWISE SHIPPING BUSINESS.

Including storing, wharfing and forwarding at and through said port and corresponding ports, and the sending of goods and other valuables through in bond or by through bills of lading to and from any and all points; the advancing of money on bills of lading and on goods and other property in store; and acting as merchants and general agents, and doing a banking and general commission business. In these departments alone the Company will find constant, active, safe and profitable employment for a considerable amount of its capital, thereby ensuring fair dividends from the start.

OTHER SOURCES OF REVENUE.

By judicious purchases, both in respect to price and locality of lands, as well as the suitability of the climate, and thence properly settling immigrants on alternate lots thereof, carefully reserving every alternate farm or section for sale later on, the Company could reasonably expect to realize from 10 to 25 per cent. net on sales of the first alternate farms or other lots, and thence, in future further realizing from 100 to 500 per cent. and upwards from the ultimate sales of the reserved building lots, farms or sections. This plan carried out on a commensurate scale would of itself, without risk of the capital invested, enrich any well-managed company.

GENERAL LANDS IMPROVEMENT DEPARTMENT.

To buy, own and sell lands and deal in real estate and leaseholds generally, and to engage in a general system of Lands Improvement, particularly including the building up, extending and beautifying the City of Brunswick and Suburban districts, and generally developing and settling the surrounding country; the establishing and settling colonies in the interiors of the various States, and parts of States, wherein immigrant settlers and other industrial classes are needed; laying out and building up villages, towns, and cities; making roads, streets and all necessary and profitable improvements; aiding in the fuller development of the vast agricultural, mineral and other

NATURAL RESOURCES OF THE SOUTH.

Southwest and corresponding sections; the breeding and rearing of horses, mules, cattle and live stock generally, for home and foreign markets; the laying out, improving, stocking and working farms of all kinds; developing water powers for manufacturing, milling and other purposes; opening and working coal, iron and other mines, and marble and stone quarries, with a view to making money by profitably employing the idle, and making homes and livings for the worthy, able-bodied indigent classes, as well as making the several properties productive and generally enhancing the values thereof and making them more saleable. In fact, the company offers

SAFE AND PROFITABLE INVESTMENTS

In every department of the General Enterprise, basing the stability of the entire Capital Stock not only upon the General Business of the Company but upon real estate carefully chosen for its intrinsic worth, its suitability for the purposes of the Company and its improvable qualities and possible continual enhancement in value from direct and surrounding improvements.

For a fuller statement of the PURPOSES and PLANS of the Company, see the Charter and Prospectuses, Documents Nos. 1, 2 and 3 of the Company's pamphlets, which can be obtained at the Offices of the Agents, or from any of the Officers of the Company.

FORMS OF APPLICATION

For Stock on the part of those who may desire to subscribe to the Capital Stock, but are unable to reach the Agent or Officer in charge of the Subscription Books, will, on application in writing to such Agent or Officer, or to the President of the Company, be forwarded, together with the necessary instructions for securing the number of Shares such Applicant may desire or that may be allotted to him or her.

PROPOSALS FOR TRANSFERRING LANDS

Or other available property in exchange for Stock in the Company will be entertained, and the suitability, quality and value of the property and titles thereto will be duly examined by proper experts in the interest of the Company; but all such proposals must be submitted in writing to an Agent or Officer, or to the President of the Company on or before the 1st day of August next, and must be accompanied with a full description, giving all particulars, including the situation and value of such property.

ANDREW J. ROGERS, Prest. B. L. I. & C. Co.
BRUNSWICK, GA.

MINING NOTES.

By T. K. BRUNER, Raleigh, N. C.

BIG RUSSELL.

The Big Russell mine, in Montgomery county, is said to be doing finely. The output is doubled, being twice as large as it was a few months since. They have struck some rich quartz ore—probably a large pocket—in the main lode, which accounts for the increase. The material as ordinarily encountered is amply rich to pay on the plan the English company have adopted in working this property.

MORRIS MOUNTAIN SOLD.

It is stated that the Morris Mountain gold mine, recently described in these columns, has been sold again. This is the second transfer of this property this year. There was a considerable advance in the price in this second sale over that paid at the first. It will be remembered that the price then paid was rather large.

NORTH CAROLINA'S PROGRESS.

But few of the Southern States have had equal advantages with North Carolina in the way of judicious advertising. Exceptional advantages have been secured for her. Hundreds of newspapers north of Mason's and Dixon's line have devoted columns to her praise. More than a hundred papers within her own borders have directed their best energies in this direction.

But a few years ago the State sent an illustrative exhibit of material resources to the empire of Austria, which remained on exhibition at Vienna for months. This was the first step. The good results of this venture were not slow in developing. Then came the Atlanta Exposition, the Boston Exposition, the North Carolina Exposition, and the World's Exposition at New Orleans. The State was properly and handsomely displayed at each with broad, comprehensive collections. These were active, progressive strides, far-reaching in their results to the State. Under the influence of these aggressive measures the State has started with renewed life, with action as the rallying cry. This is not all. The Department of Agriculture has, for ten or more years, been scattering to all nations reliable information relative to her material and other resources. These have gone with prodigal hand broadcast into the busy centers of the world in the shape of circulars, pamphlets, hand-books, special and general reports, maps, &c. The aggregate of these publications sums up several millions. One naturally supposes that this kind of wholesale advertising would have stocked the country and posted the reading public as to the character and value of the resources of the "Old North State." But not so. It has greatly stimulated enquiry, besides bringing many thousands of dollars and hundreds of people within her borders. Not only the Department of Agriculture, but the editors and public men all over the State are in constant receipt of letters from all parts of the Union, and from Canada, Mexico, England, France and Germany, asking for information about the people, government, taxation, education and religion; about ores of gold, silver, lead, zinc, copper and iron; about coal, graphite, mica, corundum, kaolin, talc, serpentine, baryta, marls, peat and muck; about granite, gneiss, syenite, porphyry, soapstone, limestone, marble, firestone, sandstone and every other building stone; about diamond, beryl, agate, zircon, garnet, ruby, hidrite, emerald, sapphire, spinel and other gem stones; about mineral waters, water-powers, woods and timbers, tar, pitch and turpentine, fish and oyster interests, manufacturing, trucking and agricultural interests, and many other things. It thus appears that the good seeds sown bid fair to have a bountiful harvest. The organization of companies to go into the lumber business; to mine for iron, the precious metals and for gems; the building of mills

and factories; the roar of four or five hundred stamps in the gold mills of the State, and the influx of an industrious, thrifty class of immigrants, all speak in unmistakable tones of the efforts that have been made to improve the industrial condition of the people and to develop the material wealth of the State. The end is not yet.

Building Up Gadsden.

[Special Correspondence MANUFACTURERS' RECORD.]

GADSDEN, ALA., April 13, 1887.

Gadsden, on the banks of the beautiful Coosa river, is attracting attention from manufacturers wherever her resources have been made known. Already it is conceded by the iron masters that no section in the vast mineral region of the United States has greater supply of iron ore than the hills which surround Gadsden. It is further conceded that the soft and hard red ores which are found within a radius of twenty miles are of a quality that demand and command attention wherever the assayer's test is made and the manufacturer's skill employed.

Transportation in every direction will soon be as good as at any point in North Alabama. Two new railroads are at present being constructed as rapidly as brains, money and muscle can push them. The Rome & Decatur road is well under way; five miles of rail are placed and thirty miles of grading completed. The Anniston & Cincinnati road has been located through the town and work on the Anniston end is being pushed by a large force. This road will join with the Tennessee & Coosa Railroad at this point, which crosses the Alabama Great Southern five miles west of us, traversing a rich field of iron and coal all the way from Gadsden to Guntersville, on the Tennessee river.

The Baltimore, Birmingham & Gulf Railroad has a corps of engineers locating a route from Birmingham to Dalton via Gadsden. This will be to Gadsden the most important road yet located, and the citizens here are lending it every encouragement.

The Coosa furnace is running on full time, and its products are bought at remunerative prices. This is a charcoal furnace of fifty tons capacity daily.

The work of excavation for the foundations of the coke furnace will be completed by April 20th. This furnace will produce one hundred tons daily.

A movement is on foot at present to establish two charcoal furnaces, with capacity of fifty tons each. About half the stock was subscribed in Chattanooga, and the remainder will be taken here.

The saw mills are running on full time, and prices fairly satisfactory.

The new hotel is fully on the way, and the foundations will be in by May 1st. This will be quite an improvement to the city.

Altogether the manufacturing outlook is bright, and before winter Gadsden will be among the manufacturing and industrial towns of the South.

M. B. P.

MR. P. J. WILLIS, of Galveston, Texas, writes us that surveys of several routes to Sour Lake are being made, and if found practicable a railroad will probably be built. "There is," he says, "no better site than Sour Lake for manufacturing lumber, shingles, furniture, broom handles, wagon timber, bricks, pottery, &c., as no greater variety of first-class timber, clays or soil and variety of mineral waters of medicinal virtues than at this most wonderful place can be found. Petroleum beds show the best surface indications of any known place, and oil men have had an eye for many years on its development, but not until now has the owner felt inclined to develop it. Another industry I feel quite sure will prove remunerative in that immediate neighborhood, viz: patent house industry, as it would be in the center of a virgin forest and at a popular sanitarium where many visitors con-

gregate and our railroads are daily locating new towns. Sour Lake is only 8 miles from T. & N. O. Railroad and 63 miles east from Houston; 10 hours run from N. O. Four trains daily pass station on T. & N. O. I would be pleased to correspond with a mill man of capital at once."

THE West Point Foundry has been posted for sale at the Real Estate Exchange. This property is situated at Cold Spring, Putnam county, in this State, and comprises 40 acres of land, with several acres of buildings. The foundry was established in 1819 and has been in constant operation ever since. In 1820 orders were received for cannon for the United States Government, and a lot of 32 pounders, round shot, smooth bore, were turned out, which were considered great guns in those days. All the celebrated "Parrott" guns, which played so important a part in settling the contest for the Union during the civil war, were made in this establishment. The property was located at Cold Spring before the advent of steam or the railroad, on account of the superior water-power (28 feet fall), and also with a view to increased safety on account of the distance from the coast. It has grown to its present proportions gradually; latterly steam power has been supplied, and now the largest castings used for any purpose are being turned out for contractors all over the country.—N. Y. Real Estate Bulletin.

THE report referred to in our issue of April 9, regarding the proposed building of a hotel at Americus, Ga., was erroneous. A gentleman writes us that that it was an April fool joke and referring to the author of it says: "A fool 365 days in the year, he has had from practice success in imposing on you one day."

WANTED

Partner with \$10,000, to stock up an Improved Ranch in Burnet county. Have a mile and a quarter frontage on Colorado river, and is one of the finest small Ranches in Texas. Correspondence solicited.

"RANCHMAN," 207 E. 9th St., Austin, Tex.

HOWARD WILLIAMS.

GORDON MACDONALD.

MACDONALD & WILLIAMS,
Attorneys at Law.

* ANNISTON, ALA.

Special attention given to Commercial Law, Conveyancing, and the Investigation of Land Titles.

Refer by permission to D. T. Parker, President

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CHAMPION IRON FENCE CO.
KENTON, OHIO.

Largest Iron Fence and Railing Works in U. S.



SPECIALTIES—Iron Stairs and Jail Work, Builders' and Ornamental Iron Work, and the only manufacturers of Malleable Iron Cresting, guaranteed against breakage; also manufacturers of the Celebrated Ohio Champion Iron Force and Lift Pumps. Send for 150-page Catalogue.

McShane & Bell Foundry

Fine Iron and Brass Castings Made to Order.

Manufacture those celebrated Bells for Tower Clocks, Court-Houses, Cotton Mills, Factories, &c. Prices and catalogues sent free. Address H. McSHANE & CO.

Baltimore, Md.

Mention this Paper.

ICE MACHINE.

The advertiser, owning a first-class Ice Machine, desires a party to take an interest in same and erect it in any good Southern town. Party taking interest to manage the business, or if stock company is organized, owner will sell and take stock.

Address P. O. Box 249,

KANSAS CITY, MO.

C. L. JACKSON & CO.

14 W. German Street,

BALTIMORE, MD.

AGENTS FOR AND REPRESENTING
STAR TOOL CO.

Lathes and Machine Tools.

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Lathes, Drills and Light Machinery.

F. E. REED,

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GARDNER VERTICAL ENGINES,

1 to 25 Horse Power.

HUYETT & SMITH MFG. CO.

Exhaust Fans and Blowers.

AKRON IRON CO.

Calendered Iron and Steel Shafting.

SCHIEREN & CO.

Extra, Standard and Electric

Leather Belting.

We carry stock of above manufacturers, machinery of all kinds. Estimates furnished on complete shop outfit.

WE HAVE SOME SECOND-HAND

ENGINES AND MACHINERY

FOR SALE.

Lists sent on application.

For Sale Cheap
ON LONG TIME.

1 32 in. x 32 in. x 9 ft. heavy, second-hand planer.

1 Davis Keyseater, 1/4 in. to 1 in., Keyseats, Bargain.

3 Steam Pumps, second-hand. All sizes.

1 Chasing Lathe, 17 in. x 5 ft. Bed. New Haven.

1 No. 4 Sturtevant Blower. Good as new.

1 Second-hand Corn Grinding Mill.

1 10 Horse Power and 1 12 Horse Power Portable Engine and Boiler on wheels, second-hand.

Vertical Engines, 1 to 20 Horse Power.

Horizontal " 6 to 90 "

Vertical and Horizontal Boilers, either iron or steel—any horse power desired.

Round and Square Tanks—all sizes.

Saw Mills and Planing Mill Machinery and Machine Shop Tools.

Also,
Shafting, Pulleys, Hangers, Belting, Belt Fasteners, Lace Leather, Belt Grease, Journal Grease, Pipe, Tubing, Fittings, Valves, Pipe Tools, Files, Bolts, Set and Cap Screws, Wrought Rim Pulleys, Sheet Gum and Packing, all kinds. Boiler Scale Preventive, Gardner Governors 1/2 in. to 4 in. in stock.

Headquarters for Gas Engines.

One Sturtevant Blower, Monogram Pattern.

WM. C. CODD,

2010 and 2012 Aliceanna Street,

BALTIMORE, MD.

REMOVED.

The Machine Tool Business of

E. P. BULLARD,

—AND THE—

Bridgeport Machine Tool Works,

Established at 14 Dey Street, in 1875, has been removed to the new and commodious stores

No. 72 Warren St. & 62 College Place,

Near Chambers Street Station of the 6th Avenue Elevated R. R.

Send for new list of tools for immediate delivery.

New York, April, 1887.

\$250 SINGLE. \$350 DOUBLE.

With Saws and Tools.

Top Saw Frame can be added to Single Mill when desired. Capacity, 3,000 to 5,000 per day with 3 men. 15 horse portable engine will drive it. Agents wanted. Send for description and terms.

ROCKWOOD, NEWCOMB & CO.
180 to 190 S. Pennsylvania St., Indianapolis, Ind.

Buy "THE NEW SOUTH."

PRICE \$2.50.

HANSONELY BOUND IN CLOTH.
Manufacturers' Record Co., Publishers,
BALTIMORE, MD.

GET THE BEST.



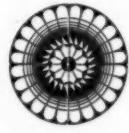
A Good Water Wheel Increases
the Value of Your
Whole Plant.

**GET THE BEST AT FIRST AND AVOID THE
EXPENSE AND DELAY OF CHANGING
THE WHEELS.**

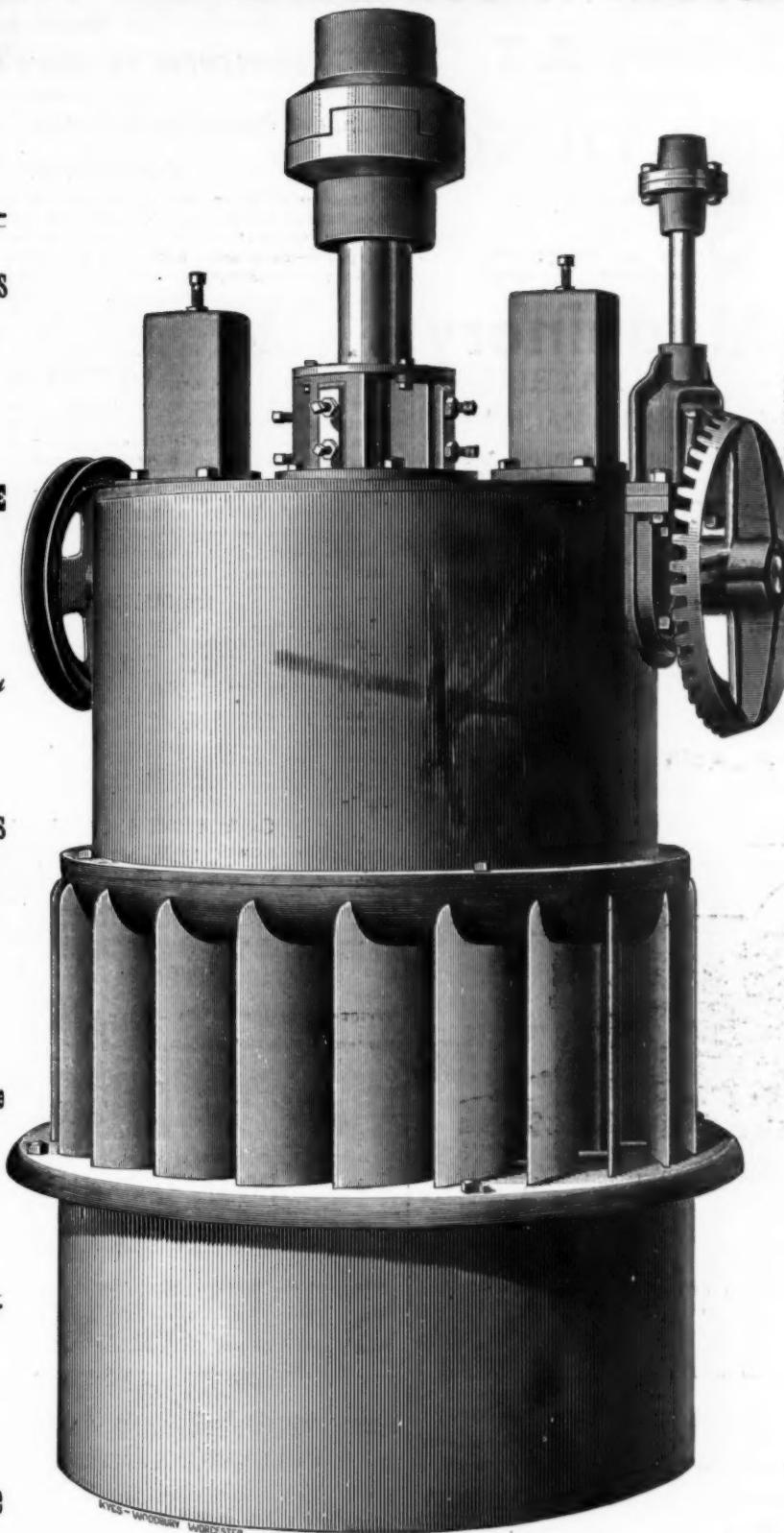
*A Good Wheel Will Serve You
Well for Twenty Years.*

**THE BEST IS THE CHEAPEST. IT DOES
MORE WORK, LASTS LONGER, AND
COSTS NO MORE FOR GEARS
AND SETTING THAN A
COMMON WHEEL.**

The Hercules Gives the Most Power for its Size
and the Highest Average Percentage
from Full to One-Half Gate of
any Wheel Ever Made.



Below we give the Names of the



When it is considered that the HOLYOKE WATER POWER COMPANY test every wheel that is put in in Holyoke, and use the wheels as a gauge or meter for measuring the water to the manufacturers and charge them for the actual quantity of water used, it will be seen that the HERCULES stands first in the estimation of Holyoke manufacturers as an economical wheel in the use of water for the amount of power produced. The HERCULES, we believe, is the only wheel of which all the sizes, both right and left hand, have been tested, some of them many times, and all brought to the standard of excellence which has been set by the makers and demanded by their customers.



Mills in Holyoke, Mass., using

THE HERCULES WATER WHEELS

THE HEAD OF WATER ON THE WHEELS AND THE POWER FURNISHED BY THE HOLYOKE WATER POWER CO.:

	Diam. in inches.	Head on Wheels.	Horse Power.	Date of Setting.
Albion Paper Company.....	39	25	295	1878
Albion Paper Company.....	24	25	125	1883
Albion Paper Company.....	45	27	445	1880
Albion Paper Company.....	30	27	200	1883
Chemical Paper Company.....	4-30	23	620	1880
Chemical Paper Company.....	5-16	23	275	1880
Chemical Paper Company.....	33	23	185	1880
Chemical Paper Company.....	42	23	305	1880
Chemical Paper Company.....	2-18	23	800	1880
Connecticut River Pulp Company....	36	18	155	1881
Crocker Paper Company.....	39	25	300	1883
Farr Alpaca Company.....	48	19	300	1878
Franklin Paper Company.....	39	20	215	1883
Geo. R. Dickinson Paper Company...	2-45	19	520	1883

	Diam. in inches.	Head on Wheels.	Horse Power.	Date of Setting.
Geo. R. Dickinson Paper Company...	36	19	170	1883
Holyoke Water Power Company.....	19	19	115	1882
Holyoke Warp Company.....	48	11	130	1879
Massachusetts Screw Company.....	27	19	90	1882
Merrick Thread Company.....	48	12	150	1880
Newton Paper Company.....	48	21	350	1880
Nonotuck Paper Company.....	48	20	570	1881
Nonotuck Paper Company.....	27	29	175	1881
Riverside Paper Company.....	48	20	325	1880
Syms & Dudley Paper Company.....	45	29	495	1881
Syms & Dudley Paper Company.....	24	29	140	1881
Springfield Blanket Company.....	36	18	155	1877
The Beebe & Holbrook Paper Co.	24	19	75	1884

	Diam. in inches.	Head on Wheels.	Horse Power.	Date of Setting.
The Massasoit Paper Company.....	39	19	197	1883
Union Paper Company.....	45	20	285	1882
Union Paper Company.....	30	20	125	1882
Valley Paper Company.....	48	27	390	1882
Wauregan Paper Company.....	48	18	210	1879
Wauregan Paper Company.....	23	18	130	1880
Whiting Paper Company.....	27	18	85	1882
Whiting Paper Company.....	18	15	30	1880
Winona Paper Company.....	48	20	340	1880
Winona Paper Company.....	34	28	135	1880
Increase since.....			9,797	
Total			779	10,576

Send for
Catalogue
No. 3.

HOLYOKE MACHINE COMPANY, Worcester, Mass.



TREVOR & CO.

Lockport, N. Y.

MANUFACTURE

HEADING SHINGLE AND STAVE Machinery

Also LATHES,
And SPECIAL MACHINERY

For Turning Handles and all
other Turned Articles of Wood.

If you want Shingle,
Heading and Stave Machinery
write for Catalogue A.

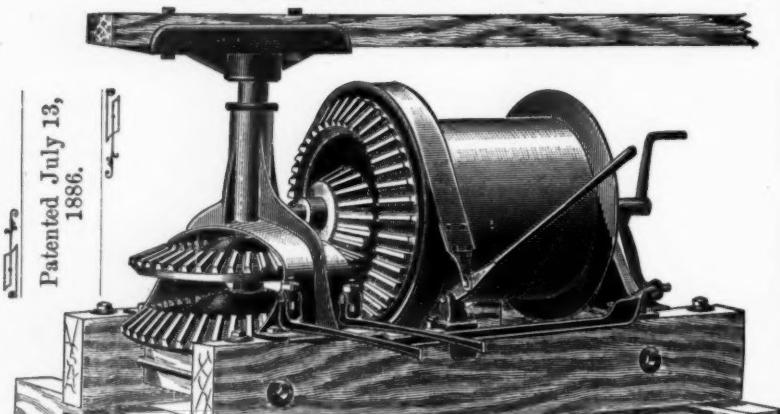
If you wish Handle
Machinery ask for Catalogue
B.

We solicit correspond-
ence, and will give it
prompt attention.

Mention This Paper.

THE CONTRACTORS' PLANT MANFC. CO.

129 ERIE STREET, BUFFALO, N. Y., U. S. A.



This cut illustrates our latest Improved Horse Power Hoisting Machine. This machine has a combination of fast and slow speed. With the fast speed a horse will lift 1,600 to 2,000 lbs. on a single line at a speed of 60 feet per minute, and with a single block 3,500 lbs. 40 feet per minute. With the slow speed a weight of 1½ tons with a single line, and with a single block 3 tons; with two single blocks 5 tons; with double and single blocks 7 tons. The speed single line 30 feet per minute, with single block 15 feet per minute.

In this combination of gears the user has the advantage of two machines embraced in one, with a saving of 25 per cent. in cost and 60 per cent. in weight.

The machine is so simple in its construction that it can be easily understood without explanation. The changing of the speed is done in an instant by simply raising or lowering a lever to the left of the machine without being obliged to stop the horse. With the powerful brake and automatic safety attachment, and with the strength and durability, together with the lightness of this machine, we think we have accomplished a purpose which will be appreciated by our customers, and give us a ready sale of this machine. Price \$150 net.

We Also Manufacture Horse-Power Hoist for Railway Contractors,
Bridge Builders and Quarrymen.
Correspondence Solicited. Illustrated Catalogue furnished on application. Mention this paper when you write.



Importers and Receivers of CEMENTS

ALL KINDS.

Heyn Brothers' Portland,
Round Top, (for Water Works.)
Cement for Cisterns and Floors.
Salt-Glazed Sewer Pipe.
Chimneys, Flue Linings, Stove Pipe, &c.
Fire Brick, Ven. Red, Mortar Colors.

WM. WIRT CLARKE & SON, 115 S. Gay Street, Baltimore, Md.

IN PREPARATION.

READY APRIL 1.

Poor's Directory of Railway Officials

FOR 1887.

A SUPPLEMENT TO POOR'S MANUAL OF RAILROADS.

Cloth, 400 Pages, Royal Octavo.

Price, \$2.00 per Copy.

CONTAINING LISTS OF

Officers of all Steam Railroad Companies in the United States and Canada; Officers of all Street Railroad Companies in the United States and Canada; Officers of New Railroads, now in process of construction, with data respecting Location of Line, etc., etc.; Officers of Auxiliary Enterprises—Bridge and Union Depot Companies, Fast Freight Lines, Express, Sleeping-Car and Equipment Companies, etc., etc.; Officers of Industrial Enterprises dependent on the Railway System—Car-Axle Manufacturers, Car Builders, Car-Wheel Manufacturers, Car-Spring Manufacturers, Rail Mills, Locomotive Builders, Bridge Builders, Contractors, etc., etc.; Officers of Associations of Railroad Officials and of Railroad Employees, Pools, Commissions, Boards of Railroad Commissioners, etc., etc.

TO THIS IS ADDED

An Alphabetical Index to the names of all the officials above mentioned, with a convenient system of reference, showing lines with which each is connected; and

An Alphabetical Index to Cities and Towns, by means of which can be ascertained the Names of all Officials in any particular city or town at once.

FOREIGN RAILROADS.

In addition to the information given respecting the railroads of the United States and Canada, the very excellent list of railroads in Mexico, West Indies, Central America, South America and Hawaiian Islands, given in last number of this work, and which proved such an acceptable feature of the book (see below) will be very much improved and elaborated.

COMMENTS OF THE PRESS.

"The least that can be said of this volume is that it is accurate as it is comprehensive; it is far ahead of any publication of the kind which has yet been attempted, and will be an extremely useful work of reference."—*Railroad Gazette*. "Brings within convenient compass most of the information required regarding railway officials. . . . The value of the book is so self-evident that a further review seems unnecessary."—*Railway News*. "In its way fully as valuable as the MANUAL."—*Boston Commercial Bulletin*. "Of great value to the commercial industries of the country."—*London (Eng.) Bullocket*. "Useful to those dealing with railroad companies."—*American Machinist*. "Will undoubtedly prove of much value and service to many."—*Iron Age*. "This immense compilation will be useful as a mailing guide. That there is a demand for it is evidenced by its publication; the Poors have a keen scent for success, and know how to make it. The list of railways in Mexico, Central and South America, which concludes this volume, is the neatest and most compact statement of the subject we have seen."—*New Orleans Picayune*.

COMMENTS OF RAILROAD OFFICIALS.

OFFICE OF PURCHASING COMMITTEE, WABASH, ST. LOUIS & PACIFIC RAILWAY, 195 BROADWAY, NEW YORK, Oct. 5, 1886.

MESSRS. H. V. & H. W. POOR, 70 Wall Street, City.

GENTLEMEN:—I have received a copy of your Directory, and find it to be a very complete and useful work of the kind. The indexes to officials and advertisements are particularly convenient, and when extended, as you propose in the coming year, will make the volume a practical business directory. Purchasing agents and others having these matters to classify will appreciate the great utility of the arrangement. The book ought to be a success.

Yours truly,

(Signed) O. D. ASHLEY, Secretary,
Wabash, St. Louis & Pacific Railway Company.

OFFICE OF THE GENERAL PASSENGER AGENT, NEW YORK, LAKE ERIE & WESTERN R. R. CO., NEW YORK, Sept. 24, 1886.

MESRS. H. V. & H. W. POOR, Publishers of Poor's Directory, etc., 70 Wall Street, City.

DEAR SIRS:—I am in receipt of copy of your Directory of Railway Officials and Railway Directors for 1886, and have examined the same and find it very complete. I am especially pleased with your classified Directory of Advertisements, by which parties desiring any kind of railroad supplies can turn to this index and immediately ascertain the names of parties advertising the kind of supplies they desire to obtain. Yours truly,

(Signed) JNO. N. ABBOTT, General Passenger Agent.

Advertising rates and all other information furnished on application to

POOR'S MANUAL OF RAILROADS,

70 Wall Street, NEW YORK.

STEAM * PUMPS FOR EVERY DUTY.

BEST MATERIALS ONLY USED.

FULLY GUARANTEED AND TESTED.

It will pay you to write for prices.

HUGHES BROS.

STEAM PUMP WORKS,

CLEVELAND,

OHIO.



To Secure **SOUTHERN TRADE**
ADVERTISE IN THE
MANUFACTURERS' RECORD.

BROWN & KING, MANUFACTURERS OF COTTON MILL SPECIALTIES.

Roller Covering, Loom Pickers and Strapping.

Dealers in Roller Coverers, Stock and Tools; Cotton and Woolen Mill Supplies

Full Line "Hick's" United States Standard Ring Travelers, Mill Wire Goods, Spring Cotters, Belt Hooks, Lacing, &c., kept constantly on hand.

Wrought Iron Pipe Fittings and Brass Goods. Southern Agents for the celebrated "B. C. & D. Oak Tanned Patent Lap Belting, Galvin Compound Wedge Gate Valve Imhauser's Watchman Time Detectors, Diamond Emery Wheel Machine Co., &c.

Office and Salesroom No. 62 S. Broad Street. ATLANTA, GA.

THE RICHMOND Fire Alarm, Police and Patrol TELEGRAPH SYSTEMS.

Adopted by the Most Progressive Cities in the United States.

MANUFACTURED BY

THE RICHMOND FIRE ALARM CO. RICHMOND, IND.

Correspondence Solicited. Send for Catalogue.

NIAGARA

Stamping & Tool Co.
MANUFACTURERS OF

TINNERS' MACHINES AND GOODS

For Working Sheet Metal, &c.

Squaring and Circle Shears,
Fruit Can Dies and Tools,
Canners' Outfits.

Superior, Corner of Randall Street,
BUFFALO, N. Y.

Write for our Catalogue and Price List and
mention this paper.

COLEMAN HARDWARE CO.

Sole Manufacturers of the

SHUMARD

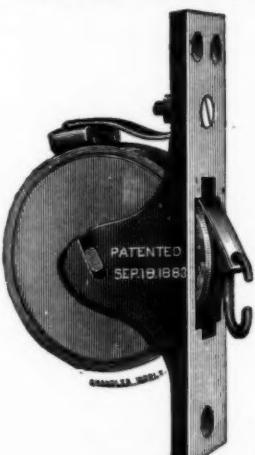
Sash Balance.

NO WEIGHTS, NO CORDS, NO PULLEYS,

NO BOX FRAMES.

Balances the Sash perfectly, and runs as easily as weights. Easily applied to any windows, and is simple, durable, reliable and practical in every way.

We make many other hardware specialties, and mention particularly the now famous



Nickel Barn Door Hangers,

WITH

Ribbed Bessemer Steel Frames, Hot Bent.

Guaranteed satisfactory to user. Send for Circulars and Prices.

COLEMAN HARDWARE CO.

(Formerly OHIO BUTT CO.)

55 Dearborn St., - CHICAGO, ILL.

Please mention this paper.

LOOK THROUGH the advertising pages carefully. They contain the announcements of the largest and most reliable houses in the country manufacturing and dealing in machinery of all kinds, mill, factory, mine and railroad supplies, hardware, roofing, builders' material, etc. If in need of anything herein advertised, write to the advertisers for catalogues, prices, &c.

Business Chances.

A FINE OPPORTUNITY.—Wanted a partner with capital to start a daily paper in a booming Southern city with 12,000 population. Have a paying and prosperous weekly with between 3,000 and 4,000 circulation and best advertising patronage in the State. Good job office, with type, presses and fixtures and paying patronage. Whole plant worth about \$6,000. Paper long established; demand for daily pronounced. A young man preferred, but a man with some capital is wanted who is willing to follow his money into the business and look after it. Address, E. A. O., care MANUFACTURERS' RECORD.

WANTED.—A practical pattern maker, capable of making ordinary drawings, with some experience in millwrighting and machine work; also, a practical man capable of selling and erecting wind-mills. Address, Progress Engine & Machine Works, Summerville, Baltimore county, Md.

COTTON PRESS.—I have completed model of a cotton press which possesses substantial merit over any press ever put on market. The advantages are economy in packing power, dispatch of work and ease of management. Not being able to handle it, I desire to dispose of the invention. Correspondence solicited. A. H. Harrington, Harrington P.O., N. C.

WANTED.—A man capable of selecting, preparing and rolling in plug tobacco factory. Must be sober and bring good references. Address C. Whittier, Whittier, N. C.

WANTED.—A man with a small capital and thoroughly acquainted with furniture manufacturing, to take one-half interest in a factory now being built at Sheffield, Ala. Address Z. T. Spencer, Sheffield, Ala.

A PARTNER WANTED with \$5,000 to \$10,000 capital to assist in carrying on the business of a first-class machine shop, with good business prospects, located in Atlanta, Ga. Address all inquiries to Box 297, Atlanta, Ga.

A PARTNER WITH \$10,000 to \$15,000 wanted to operate a cotton mill in Mississippi. Experience not essential. Mill in running order and can be had free of rent for one year, and very low rent after that. I have had so years' experience and know that the mill can clear \$100 a day. One firm will contract for all the yarn mill makes for two years at good price. Myron Kent, Natchez, Miss.

WANTED.—A situation by a thoroughly competent manager of the advertising department of a patent medicine or similar business. Long experience and first-class references. Address H. E. T., care Box 28, Atlanta, Ga.

A PRACTICAL Stove Manufacturer desires to organize a stock company in a growing manufacturing and commercial Southern city to manufacture stoves and fine castings. Corporations and capitalists who would take an interest, please address for particulars, Stove Manufacturer, care MANUFACTURERS' RECORD.

WANTED.—A position in some responsible machine manufacture, where steam engines or wood-working tools are built. Have 28 years' experience, and have several important inventions in steam engines and wood-working machinery. For further particulars and reference address H. F., 2014 W. Market street, Louisville, Ky.

HOW TO KEEP BOILERS CLEAN"

And Prevent SCALING, Price \$75.00. Removes Lime Oil, Magnesia, without use of Compounds FOAMING, BURNING



Hotchkiss Mechanical Boiler Cleaner, illustrated in an eighty-eight page book, which will be mailed free, to any address, by JAS. I. HOTCHKISS, 98 JOHN ST., N. Y. Beware of Infringers.

ALWAYS ASK FOR

ESTERBROOK'S
CELEBRATED
STEEL PENS.

PENS

LEADING NUMBERS:

048, 14, 130, 333, 185, 161

For Sale by all Stationers.

The Esterbrook Steel Pen Co.

96 John Street, New York

The HYATT PURE WATER SYSTEM.

Adapting Nature's Process—Endorsed by the Highest Authority.

A Perfect Water Purifying System.

In constant use by Cities, Towns, Water Companies, Factories, Mills, Steam Boilers, Public Institutions, Private Residences.

Indispensable to Textile Manufacturers.

Adapted to every condition requiring Clean, Bright Water in any quantity. Perfect in Operation, Quickly Cleaned Automatically, Reliable, Indestructible.

MUDY WATER MADE CLEAN.

HARD WATER MADE SOFT.

Organic and semi-soluble elements removed.

SCALE AND MUD DEPOSITS IN BOILERS PREVENTED.

With hundreds of plants in operation, treating all kinds of water, our system HAS NEVER FAILED. Promised Results Guaranteed.

Adopted by Somerville & Raritan N. J. Water Co.; City Water Co., Belleville, Ill.; Water Works, Charleston, W. Va.; Clark Thread Works, Newark, N. J.; Earl & Wilson, Troy, N. Y.; Norfolk & N. B. Ironery Co., New Brunswick, N. J.; Victor Knitting Mills, and sixteen other knitting mills, in Cohoes, N. Y.; Hon. Daniel Manning, Albany, N. Y.; Western Steel Works, St. Louis, Mo., and hundreds of others. Representative Agents Wanted. For Circulars, Prices, &c., Address

THE NEWARK FILTERING CO., Tribune Building, NEW YORK.

For Sale or Lease.

The TERRELL COTTON MILLS, at Terrell, Texas, consisting of a two-story brick house 65x150 feet, situated on the Texas Pacific Railroad, and the machinery necessary for a 2,000 Spindle Mill,—all in good condition and standing just as it did when the mill shut down three years ago. It was turning out about 1,200 yards of 8 oz. ducking when it closed. This is a fine opportunity for any one who wishes to engage in the cotton mill business in the South, as the above can be bought or leased on very favorable terms.

APPLY TO
THE TERRELL COTTON MFG CO.
TERRELL, TEXAS.

FOR SALE.

Sash, Door and Blind Factory AND PLANING MILL,

with Foundry and Machine Shops, situated on S. W. R. R. at Dawson, Ga., a town of 2,500 inhabitants, 100 miles from Macon, 40 miles from Eufaula, Ala., in a fine timbered country. Lumber \$3 to \$8 per thousand. Large shops, 75 horse-power engine and boiler in good order, and most improved machinery. Five acres of land. A good business already established. Another railroad to be built here this year, which will give the best freight advantages. Reason for selling, other business requiring our attention. Price \$80,000. Address

Dawson Variety Mfg. Co

STEARNS' NEW BENCH DRILL
LOW IN PRICE.
5.00
HIGH IN FINISH.
24 inches high. Run of Screw, 3½ inches. Bearings carefully finished with standard reamers. All parts interchangeable. Extension crank for large drilling. Chuck holds ¾ round or tapered square drill
FOR SALE BY THE TRADE
ON
E. STEARNS & CO.
SYRACUSE, N.Y.

PROTECT YOUR INTERESTS!

BUT THE IMPROVED
"STANDARD"
WATCHMAN'S CLOCK.

Recommended by Fire Insurance Companies, to control Watchmen in Factories, Warehouses, etc., etc. The only reliable instrument of its kind and warranted superior to all others. Will be sent on trial. Price for Twelve Stations Complete, \$50.

It will pay you to send for circular before ordering elsewhere.

O. E. HAUBURG.
Sole Agent, 71 Nassau St., New York.

N. B.—All kinds of Watchman's Clocks repaired and warranted to give satisfaction.

WOOD ENGRAVING
ELECTROTYPING
PRINTED SUPPLIES
Manufacturers,
Wood Engraving,
Electrotyping
and Printing.
Publishers of The Manufacturers' Exchange.
A. MUGFORD. Hartford, Conn.

THE GLOBE Incandescent Lamp.



A 400-Candle Power Coal Oil
Burner which will brilliantly Illumi-
nate a room 40 feet square.

For lighting Storerooms, Hotel Offices, Dining
Rooms, Halls, Churches, Restaurants, Saloons, etc.
Wick 12 inches in circumference.
Reservoir holds 15 pints.

Costs less than two cents per hr. to operate.
The wick is raised by a vertical movement without
Ratchets or Rollers.

Produces a soft, steady, golden illumi-
nation at about one-third the cost of gas.

Affords the convenience of but one
reservoir to fill and one globe to clean.
Specially adapted for lighting factories
where a powerful STEADY light is
required.

TWO GLOBE LAMPS will produce
as much light as one electric lamp,
and will illuminate a room with greater
satisfaction, requiring no machinery.

WE make a full line
of Oil and Gaso-
line Torches, for light-
ing Mills, Machine
Shops, Foundries, &c.

The "Victor" Convertible Furnace,

for Tinnery and Plumbers' use, which will heat coppers and melt metal
QUICKER than any furnace in the market.

SEND FOR CATALOGUE.

MANUFACTURED BY

THE STANDARD LIGHTING CO.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

Specialties.

NECESSITY, COMFORT, LUXURY.

1. **Sargent's Monarch, Empress and Premier Reclining Chairs.** These Chairs are the best of their class made in the world, having an almost endless variety of positions, made of the best material, and are upholstered to insure perfect rest. They range in price from \$35.00 to \$120.00. We also make a large variety of other styles, including our Favorite, Automatic Nos. 63, 83 and 103, which range in price from \$10.00 to \$60.00.

2. **Sargent's Invalid Rolling Chairs.** We represent but two of our numerous styles, which include all kinds, for house or street use, reclining and rigid, cane and upholstered.

3. **Sargent's Solid Comfort Back-Rest and Folding Bed Tray.** Treasures for invalids. Prices of Back-Rest: No. 1, plain, \$4; No. 2, with arms, \$5; No. 3, with arms and head-rests, \$6. Prices of Trays: No. 1, 15x25 inches, \$3; No. 2, 17x28 inches, \$4.

4. **Earth Closets.** Its merits are uncontestedly established by 10 years' trial. As a sanitary measure as well as a convenience, it should be adopted in every country house.

5. **Sargent's Sanitary Arm Commodes** are absolutely orderless. They have a double seat; broad arms that adjust independently; a metallic enameled pail with flexible rubber and metallic covers.

NOTE.—We make a specialty of Invalids' Appliances, and aim to supply every known device for the alleviation of suffering. Send for our 80-page Illustrated Catalogue.

SARGENT MFG. CO.

814 and 816 Broadway, NEW YORK.

THE MASON REDUCING VALVE
GIVES SATISFACTION WHEREVER USED
OFFICE 22 CENTRAL ST. BOSTON, MASS.

The "NEW DAVIS" Single Generator VAPOR COOK STOVE.

WITH
The Original Steel Frame and Automatic Safety Lighting Device.

All others follow as Imitations. Buy none but the
Original. Made in a full line of sizes, with
ovens above or below. The Oven on the "NEW
DAVIS" RANGE is the largest placed on
a Vapor Stove. Is supplied with Two burners
and an Automatic Lighting Device. The burners
light from the outside.

The Steel Frame Saves Breakage! Saves Freight! Saves Expense!
Saves Annoyance! Burners are Simple, Powerful and Economical, and
light like Electricity.



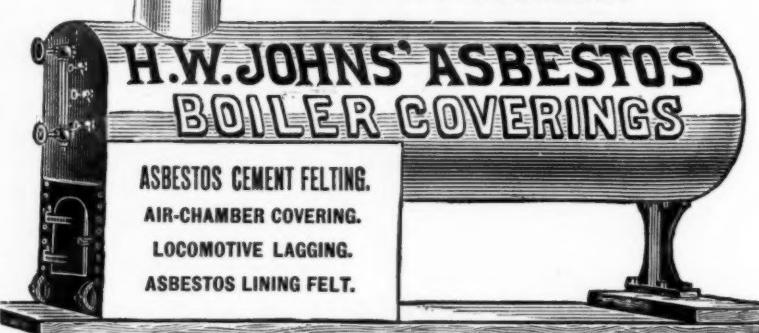
D. B. BAYLESS & CO.

CINCINNATI, OHIO. Agents for "THE NEW DAVIS."

Perkins Ave. and
C. & P. Ry.

Cleveland, O.

"THE STANDARD."



ASBESTOS CEMENT FELTING.
AIR-CHAMBER COVERING.
LOCOMOTIVE LAGGING.
ASBESTOS LINING FELT.

Samples and Illustrated Pamphlet "Steam Saving and Fire-Proof Materials" Free by Mail.

H. W. JOHNS MANUFACTURING CO.,

SOLE MANUFACTURERS OF
H. W. Johns' Fire and Water-Proof Asbestos Roofing, Sheathing, Building Felt,
Asbestos Steam Packings, Boiler Coverings, Roof Paints, Fire-Proof Paints, etc.
VULCANESTON. Molded Piston-Rod Packing, Rings, Gaskets, Sheet Packing, etc.

Established 1858. 87 MAIDEN LANE, NEW YORK. CHICAGO. PHILADELPHIA. LONDON.



THE IMPROVED FLORIDA STEAM HEATER

The best and most complete House Heater in the world.
Self-feeding, automatic, portable and saves all expense of
brick-work. Most economical. Carries steam from 10 to 12
hours without attention. Compact. 14 sizes, from 4 to 6 feet
high. Anti-clinker grate, easily shaken, no dust. Sales larger
than the combined sales of all reputable Steam Heaters.

3500 in ACTUAL USE,
all giving the best satisfaction. Estimates furnished on application.
Send for Illustrated Catalogue. Address

PIERCE, BUTLER & PIERCE MFG. CO.,

SOLE MANUFACTURERS, SYRACUSE, N.Y.

GENERAL | GEO. R. COBB, 97 William St., New York, N.Y.
AGENCIES | CRANE BROS. MFG. CO., Chicago, Ill.
| N. A. ELSLONSON & CO., Baltimore, Md.
| R. TABER & SON, St. Louis, Mo.
| JAMES P. WOOD & CO., Philadelphia, Pa.

THE MANUFACTURERS' RECORD

IS THE FOREMOST EXPONENT OF THE INDUSTRIAL
INTERESTS OF THE SOUTH,

TRADE NOTES.

MESSRS. CLEVELAND & HARDWICK, Erie Engine Works, Erie, Pa., report the sale of 52 engines for the month of March, distributed in the following States: New York, Pennsylvania, Ohio, North Carolina, Georgia, Michigan, Missouri, Tennessee, California, Illinois, Kentucky, New Hampshire and Rhode Island. One order for 20 engines comes from Georgia this month. These engines are reliable, cheap and popular, as will be seen by the growing demand in all parts of the country. Cleveland & Hartwick solicit correspondence and will mail their catalogue and price list upon application.

THE Niagara Stamping & Tool Co., of Buffalo, N. Y., report a good business in tinsers' machines and tools for working sheet metals. The demand for fruit-can dies and tools and canners' outfits is quite brisk at this season. The Niagara Stamping & Tool Co., have issued a very complete catalogue and price list which will be interesting to all using any of the above machinery. If you have not already a copy, one will be sent upon application to the manufacturers. All tools and machines made by this concern are sold at factory prices, as they have no agents or traveling men, and can therefore give the lowest cash prices.

THE Star Forges, made by the Star Machine Co., Buffalo, N. Y., are a great success, and the sales are constantly increasing in number. Less than one year ago they were placed on the market, and yet in that short time over 1,100 have been sold, and now the demand for them is so great that the Star Machine Works is taxed to its utmost capacity to turn them out fast enough. Some entirely new designs have just been completed and will soon appear in catalogue. Every blacksmith and forge user should see one. Apply now for copies.

THE Stewart Heater Co., Buffalo, N. Y., have recently completed a feed water heater and purifier that has many new features and improvements over the old patterns. Patents on it have been allowed, and all who have seen the new heater and understand its principle pronounce it a grand success, and predict for it a large sale as soon as it becomes known and is placed on the market. An illustration of it will soon appear in the MANUFACTURERS' RECORD. The Stewart Heater Co. also manufactures a full line of boiler feed pumps, a very ingenious flue blower, etc. Every steam user should see their illustrated catalogue. Send address on a postal card and one will be forwarded promptly.

FOR the past two months the well-known firm of Sniggs & Co., manufacturers of wood-working machinery, have had almost more business than they could well attend to, a large portion of it being from the South. Messrs. Sniggs & Co. make a line of wood-working machinery that is well adapted for Southern trade, for working yellow pine, etc. A new catalogue of the latest machines will soon be out and will be sent promptly to all who apply now.

THE Contractors' Plant Co., of Buffalo, N. Y., manufacture almost every conceivable device for contractors' use; also portable hoisting whisms and prospecting outfits for miners, etc. This concern are desirous of corresponding with contractors or others needing anything special in their line. Cuts and descriptions of various machines kept in stock will be sent upon application.

AMONG the prominent corporations who have recently bought the Reliance Gauge Company's (Cleveland, O.) new safety water columns are the Pencoyd Iron Works, of Philadelphia; the Cleveland Rolling Mill Co.; the L. Schiedler & Sons Co., Cincinnati; the Cleveland Paper Co. (2d order), and the Midvale Steel Co., of Philadelphia.

THE Egan Company, Cincinnati, Ohio, U. S. A., have issued a poster printed in colors, displaying 63 of their justly celebrated machines for working wood. It also gives information of value to any wood-worker, such as the correct methods for putting rubber bands on band-saw wheels, brazing band-saw blades, and other matter of like character. The Egan Company will take pleasure in mailing a copy of this poster to any wood-worker who will send them his address, stating that he saw this notice in the Baltimore MANUFACTURERS' RECORD, and on condition that he will post it in a prominent place in the establishment where he is employed.

THE M. C. Bullock Manufacturing Co., of Chicago, report the following among recent shipments of machinery from their works: To a coal mine in central Illinois, a complete pumping outfit. To Bridgeport, Conn., 1 No. 3 4-page Perfecting Boss Printing Press, with folder and wetting machines. To the South Gogebic Range, 1 stand pipe outfit for a Little Champion Diamond Drill. To the Sunday Lake Mining Co., Gogebic Range, Wis., 1 75 H. P. boiler complete. To Sec. 33 Iron Mining Co., Hurley, Wis., 1 Double Lane Hoist complete, with boilers. To the Buffalo Mine, Negaunee, Mich., 1 Lane Mine Pump. To the C. K. & N. R. R., 1 Challenge Diamond Drill, with complete outfit for prospecting for coal at great depths. To Tower, Minn., 1 Climax Diamond Prospecting Drill, to be used in a very inaccessible district in boring and taking out sample cores from magnetic iron ores. They report business booming and that they are running their entire works with double gangs of men.

THE Reliance Gauge Company, of Cleveland, O., has received an order for eight low water alarm gauges for the new Indiana State Capitol building at Indianapolis. The gauges are to be attached ready for use, and it is said that the company will make the job a model one in every respect.

THE Volker & Felthousen Manufacturing Co., of Buffalo, New York, are sending out an illustrated price-list of their duplex steam pumps. They say: "The Buffalo duplex steam pumps have been on the market and in service long enough to fully substantiate any claims we make as to capacity and economy of space occupied, or steam used. They are very compactly and substantially constructed. All working parts are made extra strong and of lasting material. The parts are also made interchangeable, so that in case of accident to any part, or by reason of wear a replacement is necessary, the parts can be duplicated at once. The water pistons are made of brass, or suitably packed for hot or cold water or other liquids, adjustable to any pressure and always tight. The steam piston has elastic rings, and the water plunger works in a metallic sleeve, and either can be removed or repaired without disconnecting the pump. Every pump guaranteed to give perfect satisfaction."

A VERY beautiful little 8-page circular, in a dainty cover, has been gotten up by Messrs. Merchant & Co., of Philadelphia, entitled "facts about the manufacture and relative values of roofing plates and about the laying of a good roof." It tells of the manufacture of roofing plates, the assorting, sizes, thickness, weights, stamping, laying the roof, soldering, painting the roof, etc. In addition to the stocks of "Gilbertson's old method" and "Camaret" guaranteed roofing plates carried by Messrs. Merchant & Co. in Philadelphia, New York and Chicago, they are also kept in stock in the following cities: Sidney Shepard & Co., Buffalo, N. Y.; John Dunlap & Co., Pittsburgh, Pa.; F. H. Lawson & Co., Cincinnati, Ohio; Rathbone, Sard & Co., Detroit, Mich.; Goldsmith & Loewenberg, Portland, Oregon; Williams & Ingle, San Diego, Cal.; Geo. H. Tay & Co., San Francisco, Cal.

MESSRS. A. & F. BROWN, said to be probably the largest manufacturers of pulleys, shafting and hangers in this country, will remove their office from 43 to 44 Park Place, New York, on May 1. This firm is already known to our readers through our advertising columns.

MARK TWAIN'S LATEST SUCCESS.—Mark Twain has struck a bonanza in "English as She is Taught." He is reading extracts from it on all occasions, and he has written one of the funniest articles he ever wrote describing it in the April Century. When he sent the Ms. of this article to the editor of the Century with the request that it be printed in the April number, which appears on the first day of that month, the editor, after reading it, thought it was a practical joke appropriate to the day. Until he had Mr. Clemens' positive assurance that it was a genuine thing and heard the story of how the compilation was made from the lips of the lady who made it, he could scarcely believe that there was so much unconscious humor in the world. Mr. Clemens read extracts from the book at the author's readings in Boston for the benefit of the Longfellow Memorial Fund, and Dr. Holmes, who sat upon the platform and who was wholly unprepared for what was coming, laughed till the tears rolled down his cheeks to hear himself described by a well-meaning but altogether inaccurate school-boy as "a profligate and amusing author," while the clergymen in the audience joined in the laugh created by the remark of a similar boy that "there are a great many donkeys in theological gardens." The little book from which Mr. Clemens made these extracts was a success before Messrs. Cassell & Company published it, for its audience was waiting impatiently for it. The covers of the cloth edition are unique and were designed by Mrs. Wheeler and made from stuffs manufactured exclusively for the associated artists.

List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date April 12, 1887. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Allen, J. M., Hampton, Fla.	Rotary pump.....	360,841
Barnard, W. T., Baltimore, Md.	Telegraphy.....	360,844
Baxter, William, Jr., Baltimore county, Md.		
Electric motor. (3 patents).....		361,215
Bernheim, C. H., Conover, N. C.	Quilting-frame for sewing machines.....	360,846
Cooper, J. W., Atlanta, Ga.	Photographer's chair.....	360,855
Cravens, J. R., Ringgold, Ga.	Hub.....	360,858
Davis, J. S., Louisville, Ky.	Gate.....	361,03
Dickson, J. A., Pulaski, Tenn.	Automatic brake for vehicles.....	360,954
Eberman, A. S., Baltimore, Md.	Injector.....	361,148
Gaskins, J. L., Starke, Fla.	Lumber-drier.....	360,958
Harrell, S. J., Lampasas, Texas.	Manure distributor.....	369,877
Hutchinson, A. S., Gainesville, Fla.	Sewing machine needle.....	360,884
Kling, Isaac, Louisville, Ky.	Car-coupling.....	361,165
McKenna, Robert, White, Tenn.	Centrifugal speed governor.....	361,251
Pillings, G. T., Baltimore, Md.	Water engine.....	361,282
Savage, Reavel, Baltimore, Md.	Cigarette and match box.....	361,085
Selden, Charles, Baltimore, Md.	Railway brake.....	361,090
Sellmayer, J. M., Shreveport, La.	Fan attachment.....	360,922
Smith, J. H., Little Rock, Ark.	Peach stoner.....	361,093
Smither, J. C., Nicholasville, Ky.	Sliding trundle bed.....	361,289
Stanley, J. D., Eastover, S. C.	Device for charring surfaces of timber. (3 patents).....	361,095
Thompson, E. W., Augusta, Ga.	Seed or grain feeding machine.....	360,929
Tourne, J. E., New Orleans, La.	Apparatus for cooling car axle boxes.....	360,978
Wheeden, J. C., Baltimore, Md.	Sail for vessels.....	361,102
Williams, J. H., Campbellsville, Ky.	Lap ring or link.....	361,103

A. P. THAYER,
Solicitor of U. S. and Foreign
PATENTS,
No. 86 Astor House, New York.
Experience of Over 20 Years.

Athens, Tenn.

Brilliant Outlook for the Town.

GREAT ENTERPRISES UNDER WAY.

Bids Wanted for a Hotel.

Over \$50,000 worth of lots have been spoken for by persons here and elsewhere of the property of the Athens Mineral Land & Improvement Company, and the indications now point to very large sales on the opening. Engineers are surveying the property and laying it off into wide streets and beautiful lots. Elegant lithographic plates will be issued soon, showing the location of the large mills, new railroad and other improvements on the property. Designs for the mills are now being ordered and will be on exhibition in the company's office in this place and at other points throughout the country in a short time. The company is composed of thirty members, among them prominent bankers in New York City, Chicago, Cincinnati and large capitalists of Louisville, Selma, Atlanta, Chattanooga and Knoxville. The president of the Tellico Iron Company is the president of this company.

The following improvements will be guaranteed in the face of each deed made to purchasers of the company's lots.

A cotton plaid mill, estimated cost \$100,000; a five-set woolen mill, \$100,000; a cotton sheeting mill, \$90,000; one 3,000-spindle cotton carpet warp mill (for jeans), \$60,000; a hotel to cost \$30,000, and a public school building to cost \$10,000. The company also guarantees the erection of water works, street car line, electric lights, &c., and a railroad through the property to the company's own iron fields and marble quarries, and to the Tellico iron mines, twenty-two miles distant. The iron property to be opened by this road is not only among the finest in the South, but one single vein of red hematite is a geological wonder, which the Co. will take pleasure in showing to experts and others. This vein will range from five to 100 feet in thickness and dips into the earth between walls of slate at an angle of about five degrees. The ore is of black formation, and is packed in the vein like brick in a kiln, which it resembles in appearance. It analyzes fifty-five per cent. iron and only seven per cent. of silica.

Now, these are solid facts. The proofs are here and the company invites thorough inspection of its plans and purposes, and particularly of the almost fabulously rich iron deposit. Laying alongside these immense deposits of red hematite are inexhaustible quantities of the finest brown hematite steel ore, and very large beds of jet black and variegated marble, which is susceptible of the highest polish.

There is no more inviting field in the South. The lots will at first be put upon the markets at such prices as that their value will surely enhance 100 per cent. when ground is broken for the improvements guaranteed. The office of the company is in the First National Bank building, Athens.

In conclusion, we feel that Athens has a great future before her, dependent not upon a dream, lottery or a visionary hope, but assured by a determination upon the part of combined capital to build a manufacturing city out of what is already one of the oldest and best towns in the South. Not many months will pass until the black smoke from a dozen stacks of mills and furnaces will darken the sky about us, and the iron fields of McMinn county, undoubtedly the richest in the South, and her other mining interests fully developed.

Liberal Inducements Offered.

We offer MOST LIBERAL INDUCEMENTS to parties desiring sites for small manufactures, and those with large works we will help move at our expense.

■ NORTHERN MANUFACTURERS wanting a SOUTHERN LOCATION CAN DO NO BETTER than correspond with us, or come and see our outlook. We will also take stock in legitimate manufacturing enterprises.

Bids for Hotel Wanted.

We will receive bids, accompanied with plans and specifications, for a brick hotel to cost thirty thousand (\$30,000) dollars, building to be three stories high. Contract to be let to the lowest, best and most desirable plans and bidder. Company reserves the right to reject any and all bids. Building to be finished by January 1st, 1888. Bids to be opened May 1st, 1887.

J. L. YOUNG, Secretary,

Athens Mining & Mfg. Co.

ATHENS, TENN.

Awkward Figures for Free Traders.

The New York Star is a good Democratic paper, barring its free-trade proclivities, and it therefore rejoices as follows: "What a terrible scourge to the country is this 'curse of Democratic administration.' Bradstreet's tells us the aggregate of receipts of wages of laborers is as high now as in the high watermark year 1882, and that there are nearly half a million more men employed in our industries. Either commercial statist's or Mr. Blaine's predictions are wrong. Both cannot be right; and in this case it is quite certain that the figures do not lie."

These commercial statistics are very encouraging, but it seems to us that they are somewhat awkward figures for a paper of the Star's way of thinking. Would there be nearly half a million more men employed in our industries than in 1882 if those industries had not been protected? would wages paid laborers have increased during the past five years if the whole country had been groaning under the oppression of the "robber barons?" Granting that the tariff needs revision so as to reduce the revenues of the nation, now too large, still has not the protective system as a system been beneficial?

These are questions to which the esteemed Star should "seriously incline," now that it has got the Crosby high license bill off its mind. Laying aside theory it should look facts in the face and determine after it has done so whether protection has not been the principal cause of the growth of our industries. We of the South for years before the war were taxed to build up the industries of the Middle and Eastern States. We now propose to have our share of the benefits arising from this system.

Either commercial statistics or the free-trader's predictions are wrong. For years we have been told that protection would be the ruin of the country. The answer to that is "nearly half a million more men employed in our industries." These figures speak volumes. They tell of the work of development going on at the South, itself the result of protection; they tell of confidence in a Democratic administration which is seeking to administer the affairs of the Government honestly and fairly. If the wishes of that administration are followed any revision of the tariff that may take place will guard carefully the industries of the country.—Mobile Register.

HON. WILLIAM D. KELLEY is the Father of the House of Representatives, having served consecutively in that body from July 4, 1861, when Mr. Lincoln called the Thirty-seventh Congress in extra session, to the present time, a longer period of service than has fallen to the lot of any other living Representative in Congress. The Judge, as will readily be inferred, is no longer young, but he is far from being an old man. He was born in Philadelphia April 12, 1814, and consequently entered upon his 74th year on Tuesday of this week. He is now at Anniston, Alabama, one of the booming iron towns of the South, stopping at the famous Anniston Inn. We learn from the Hot Blast of that place, for April 9th, that the Judge's birthday was to be celebrated by a grand banquet, tendered him by his friends in Anniston. The announcement in its columns read as follows: "The banquet will be at the Inn, and invitations have been issued to many of the notable men of the country, regardless of political faith or sectional lines, to be present on that occasion. Covers will be laid for 200 guests, and the spread will be the finest ever set out in Alabama." This is certainly a very high compliment. We congratulate our old friend upon his enjoyment of good health and all his pristine vigor at the age of 73, and upon the success he is meeting in assisting to break down the remaining barriers which have separated the North from the South.—The Bulletin of the Iron & Steel Association.

Building Lumber Mill.

ST. JOSEPH, MICH., April 16, 1887.

Editor Manufacturers' Record:

We are building mill at Tallapoosa, Ga. Will, in all probability, have it running May 1st next. In a short period we shall commence the erection of our planing mill. We are not incorporated as yet, but shall make application for charter as soon as we get our business to running. The firm consists of W. A. Preston, E. H. Kingsley, A. B. Chivis; all from St. Joseph, Mich. E. H. Kingsley is manager.

W. A. PRESTON.

HAWKINSVILLE, GA., April 16, 1887.

Editor Manufacturers' Record:

We have formed a company, composed of men of ample means, who propose at an early day to build and put in operation a manufacturing plant for the purpose of working up available timber at this place. It will be known as the Hawkinsville Agricultural & Machine Co.

D. C. FITCH.

To Build a Court-House and Jail.

MURPHYVILLE, TEXAS, April 16, 1887.

Editor Manufacturers' Record:

The contract will be let for building a court-house and jail, both not to exceed \$30,000, on the 9th of May next, at Murphyville.

T. S. BROCKENBROW.

To Remodel Furnace.

IVANHOE FURNACE, VA., April 18, 1887.

Editor Manufacturers' Record:

The New River Mineral Co. expect to alter their charcoal furnace to coke, about 75 tons capacity. Propose doing it this spring and summer.

W. C. VAN DOREN, Agent.

Erecting Saw Mill.

NEW BERN, N. C., April 18, 1887.

Editor Manufacturers' Record:

We are erecting another saw mill near the present one. Will cost about \$7,000. Capacity of new mill will be about 20 M feet 4-4 per day.

WM. B. BLADES & BRO.

DALEVILLE, VA., April 18, 1887.

Editor Manufacturers' Record:

We propose to establish a cannery for the purpose of packing tomatoes and peaches.

T. E. NINGER & CO.

Erecting a Pulp Mill.

AUGUSTA, GA., April 10, 1887.

Editor Manufacturers' Record:

The wood pulp mill in Aiken county, S. C., is now under construction. It is situated on Corn creek, 2 miles below Augusta, Ga. Its capacity will be about ten tons of dry pulp per day.

A. J. TWIGGS.

COLORA, MD., April 16, 1887.

Editor Manufacturers' Record:

To our two acid chambers we are now adding a third.

THE WARING FERTILIZER CO., OF CECIL CO.

Important.

When visiting New York city, save baggage express and carriage hire, and stop at the Grand Union Hotel, opposite Grand Central Depot.

600 handsomely furnished rooms at \$1 and upwards per day. European plan. Elevators and all modern conveniences.

Restaurants supplied with the best. Horse cars, stages and elevated railroads to all depots. You can live better for less money at the Grand Union Hotel than any other first-class hotel in the city.

†

WHEN in Cincinnati, stop at the Palace Hotel. Rates, \$2.00 and \$2.50 per day; meals, 50 cents each. Elegant rooms; fine table, and centrally located.

‡

Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.

BALTIMORE, April 20, 1887.

	BID.	ASKED.
Virginia 6's Consols C.	53
Virginia 3½-5 10-40's.	43	43½
Virginia 5's new.	66½	67½
Virginia Consol Coupons.	37½	38½
Virginia 10-40 Coupons.	36
N. Carolina 4's.	99½	100%
N. Carolina 5's.	122
Louisiana 4's.	90	93
Charlotte, Col. & Aug.	33
Wil. & Wel.	106	120
Pitts. & Con. 1st, 7's	122
N. Cen. 6's.	120
N. Cen. Gold 6's C 1900.	120	121
N. Cen. 6's C 19.	120	121
N. Cen. 5's (Series B).	113½	110
Va. & Tenn. 2d 5's.	125
Wil. & Wel. 5's.	110	121
Atlan. & Char. 1st, 7's.	123½	124½
Col. & Green. 1st, 6's.	103½	106
Va. Midland st. 6's.	120	121
Va. Midland sd. 6's.	116½	117½
Va. Midland 3d. 5-6.	109½	111
Char. C & Aug. 1st, 7's.	123½	124
Char. C & Aug. 2d, 7's.	117	122½
Ga. Pacific 1st, 6's.	108	110
Cape Fear & Y. Valley 6's.	96½	97

TO READERS OF ADVERTISEMENTS.

Readers of the MANUFACTURERS' RECORD who order any goods herein advertised, or ask for information concerning them, will oblige the publishers by stating that they saw the announcement in the columns of this paper.

Look Carefully through this paper and you may find an advertisement of some machinery or other goods that you are in need of. Preserve this copy for future reference.

"THE NEW SOUTH"

PUBLISHED BY THE

Manufacturers' Record Co.

BALTIMORE.

With a view of meeting the demand for a thoroughly reliable book upon the whole South, the MANUFACTURERS' RECORD CO. has just issued a very handsome volume of nearly 500 pages entitled

THE NEW SOUTH;

Its Resources and Attractions.

This book is devoted to an exposition of the South. It gives an accurate and comprehensive description of the Southern States, noting each State separately and giving their distinctive features and most salient characteristics; it tells of their resources and attractions, their present condition and vast possibilities; it treats of topography, soil, climate, woods, watercourses and manufactures; it portrays the attractions to the capitalist and those seeking homes in the South; it shows what the South is, what she has already done in the development of her agricultural and industrial interests, and what she is likely to become by reason of her boundless resources in soil, minerals, climate, rainfall, timber, marls and geographical position, and the vast variety of products possible to a wise and varied husbandry, and a grasp of her rich opportunities for manufactures.

It is a work of great value. No similar publication has ever before been issued in this country. It is just what was needed.

No one North or South desiring to be informed of the advantages and resources of the South, of the more than marvellous progress that is being made, and of the wonderful future of this section, can afford to be without this book.

Handsomely Bound in Full Russia, Gilt Edges, \$3.00, including Postage.

Handsomely Bound in Cloth, - \$2.50, including Postage.

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Founders and Machinists.

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LEFFEL • TURBINE.

Prices as Low as any



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WATER • WHEEL,

other First-Class Wheel.

Machine-Moulded

MILL GEARING.

Our plant for the production of MACHINE-MOULDED MILL GEARING is unequalled in the country, and we are prepared to fill orders with dispatch and at GREAT SAVING IN COST OF PATTERNS.

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Agents wanted in every
Southern town and city.

Hardware Dealers write
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Manufacturers of TWIST DRILL BITS



Balz Patent Drill Chuck for bit Stock Drills.

For WOOD and METAL.
Measuring Machines, Comparators, Reamers, Drill Chucks, Tool Holders and Special Tools.
Send for Illustrated Catalogue and Prices.

Buy "THE NEW SOUTH" Handsomely Bound in Cloth. Price, \$2.50

Manufacturers' Record Co.

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BALTIMORE,
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Electric-Lighting Plants

For Sale Cheap.

Used three months during one season of a New England Exposition.

GOOD AS NEW.
FULLER DYNAMOS,

One of fifty (50) arc lamps, one of twenty-three (23,) and one of nine (9.)

All in First-Class Order
AND ALL COMPLETE.

WILL BE SOLD AT ONE HALF OF FIRST COST.

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LIGHT,
Care of MANUFACTURERS' RECORD,
Baltimore, Md.

FINE
Cut Work
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SPECIALTY
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Printing House,
Cor. Exchange Place & Commerce St.

GOOD HOUSEKEEPING.

VOLUME FIVE,

May 14th to November 12th, 1887, Inclusive.

In the detailed conduct of GOOD HOUSEKEEPING it has never before had so rich a Bill of Fare to lay before its readers as the one prepared for Volume Five. A few of the most appetizing items of the different courses may be named without prejudice to the many other attractive and well prepared side dishes, always awaiting a place on the Table of Contents.

A NEW SERIAL BY CATHERINE OWEN.

Catherine Owen, with the initial number of Volume Five, commences Serial of practical home life, entitled "MOLLY BISHOP'S FAMILY,—FROM BABYHOOD TO MEN AND WOMEN; A HOME STORY OF LIFE'S VISCISSITUDES." This Serial takes up the family of Molly Bishop where it was left at the close of that very popular publication "Ten Dollars Enough," and gives much interesting data and detail regarding the infancy, childhood, manhood and womanhood of the Bishop Family, with practical lessons for the guidance of those who don't know, but would like to know, how the Children of the Household should enjoy health and long life and a wealth of riches, the value of which may not be estimated by the measurement or weight of gold and silver standards.

HOUSEKEEPING IN FOREIGN LANDS.

1. "HOUSEKEEPING IN AN ENGLISH RECTORY," a very entertaining illustrated paper, is given in Volume Five, written for GOOD HOUSEKEEPING by a resident of a charming English rectory.

2. "HOUSEKEEPING IN HONDURAS," with illustrations, prepared by an American temporarily residing in Honduras, is another very attractive and appetizing diet on the Volume Five bill of fare.

3. "HOUSEKEEPING IN FLORENCE," with an illustration of the kitchen of the writer, who writes of her own observations and experiences.

4. "SWISS HOUSEKEEPING," by an experienced housekeeper and, at the same time, an entertaining writer.

COFFEE MAKING AND COFFEE SPOILING.

"SIX CUPS OF COFFEE," prepared in response to an order from GOOD HOUSEKEEPING, for consumption in the Homes of the World, by the world's best authorities on the subject of Coffee Making.

CLARK W. BRYAN & CO.

New York Office,
239 Broadway. SPRINGFIELD, MASS.

Buy "The New South"

PRICE \$2.50.

HANDSOMELY BOUND IN CLOTH.

Manufacturers' Record Co., Publishers,
BALTIMORE, MD.

PITTSBURGH LOCOMOTIVE AND CAR WORKS,

PITTSBURGH, PA., Manufacturers of
Locomotive Engines for Broad or Narrow Gauge Roads,
From standard designs or according to specifications, to suit purchasers.

TANKS, LOCOMOTIVES OR STATIONARY BOILERS FURNISHED AT SHORT NOTICE.
A. STEWART, Pres't. D. A. WIGHTMAN, Supt. WILSON MILLER, Sec'y and Treas.



BUFFALO HAMMER CO., Buffalo, N. Y., U. S. A.,
Solid Cast Steel Hammers, Sledges, Mauls,



RAILROAD TRACK TOOLS. &c.

Every Hammer or Tool having our name is fully warranted. Catalogues and discounts sent on application.

BAGNALL & LOUD BLOCK CO. BOSTON, MASS.

Largest Manufacturers of Tackle Blocks in the World.

Manufacturers of the Latest Improved Self-Adjusting ROLLER BUSHED and GENUINE METALINE BUSHED
and Iron Bushed Rope and Iron Strapped

— TACKLE BLOCKS. —

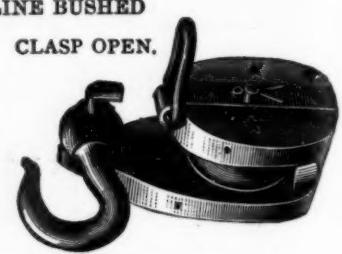


Improved Self-Adjusting Roller Bushed Iron Sheave.



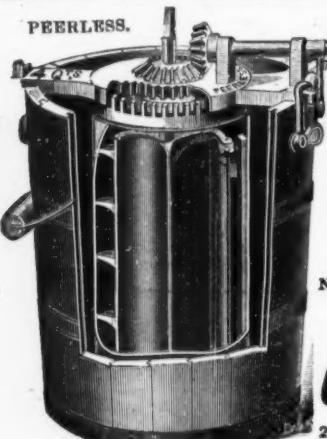
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STAR BRAND.

Improved Harcourt Patent Block.



Send for Catalogue
No. 5.

Improved Self-Locking Link Snatch Block.



The Gooch "Peerless"

And "Giant" Freezers.

OUR FREEZERS STAND UNRIVALED.

THE BEST GOODS EVER MADE.

Superior in Every Particular.

No other Freezers ever had such a sale. Send for Price-List and Discounts.

PRICES REDUCED FOR 1887

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Manufacturers of
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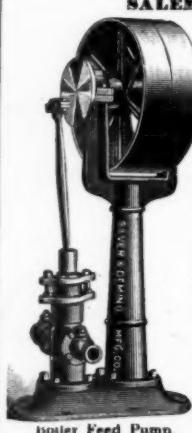
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Wind Mill Pumps and
Supplies, Hand and Power
Rotary Pumps,

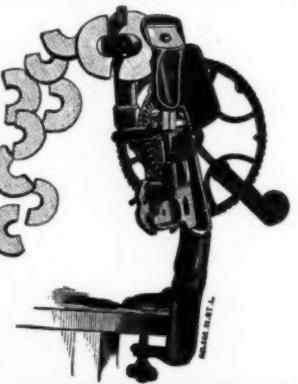
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for Farm and Domestic
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and Plantations, sent on
application.



CHAMPION APPLE PAPER. The
Two Knife Apple Paper pares an apple by two turns
of the crank. Manufactured by
READING HARDWARE CO., Reading, Pa.



Cleveland Machine Co.

SUPERIOR SOLID STEEL SHEARS. FORGED FROM

BAR STEEL AND TEMPERED IN OIL.

WE CHALLENGE COMPETITION FOR

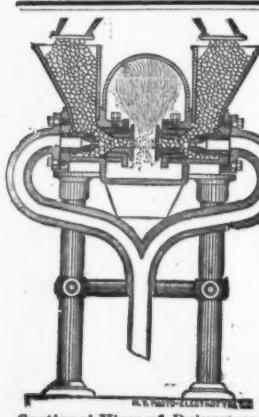
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THE FINEST. AS GOOD AS THE BEST.

We Expect to Lead, and you cannot afford to lose a chance of keeping posted on the IMPROVEMENTS of the age.
Get our prices, and then try a sample order. Your customers will compel you to order again.

Address, with name of paper where you saw this,

The CLEVELAND MACHINE CO., 143 to 161 Leonard St., CLEVELAND, O.



PNEUMATIC PULVERIZER.

The principle of pulverization consists in the employment of

TWO POWERFUL OPPOSING CURRENTS

of dry super-heated steam, so arranged that they continuously charge themselves with crushed or granulated material, and by the great force and velocity of the steam currents the minerals are dashed against each other with such power of concussion as to cause the hardest ores to be pulverized to any degree of fineness desired. The high temperature of the super-heated steam currents employed, through which every minute particle of ore must pass, causes them to become very hot and dry, which produces a beneficial effect upon sulphur and ores containing rusty Gold. The light weight and simplicity of construction of the Pulverizer, the extremely small and inexpensive wearing parts are the WONDER and SURPRISE of all who witness its operation. The Company are prepared to furnish complete plants for pulverizing

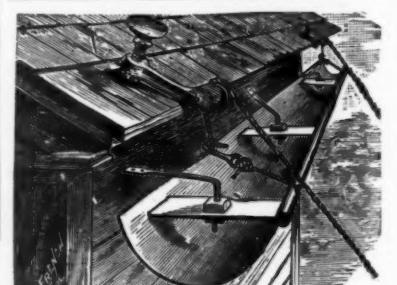
10 to 200 Tons Per Day,
including a Sectional Steam Boiler supplying all the power required.

PNEUMATIC PULVERIZER COMPANY,

I. F. HOLMAN, Pres't.
F. A. LUCKENBACH, Supt.

2 and 4 Stone Street, New York.

WRITE FOR PARTICULARS.



THE WOODRUFF'S PATENT CELEBRATED
AMERICAN SUSPENDING EAVE TROUGH
HANGER. The best in the world. Manufactured
by GEO. W. HEARTLEY, 303 St. Clair St., Toledo,
Ohio. Send for prices.

If you are not already a subscriber to
the BALTIMORE MANUFACTURERS' RECORD,
send us \$3 and you will receive it regularly for
one year, or six months for \$1.50

→ HARDWARE. ←

Baltimore WHOLESALE Prices.

ANVILS.
Eagle and Vulcan..... \$10.00
Wright's..... 90c
Armitage's Mouse Hole..... 90c
Trenton..... 10c
Wilkinson's..... 10c

AUGERS AND BITS.

Conn. Valley Mfg. Co. extra. 60&10%
Douglas Mfg. Co. No. 1, 60&10%
Ives..... 90c
Cook's Douglass Mfg. Co. 10c
Griswold..... 10c
Patent Solid Head..... 10c
Russell Jennings' Auger, Dowell, Machine-
Dowel and Hand Rail Bits..... 10c
Ives' " Jennings" Bits..... 10c
Expansive Bits, Clark's small, 10c; large,
20c..... 10c
Expansive Bits, Ives'..... 10c
Expansive Bits Blake's..... 10c and 15c
Hollow Augers, Douglass'..... 10c
Hollow Augers, Douglass'..... 10c
Hol. Aug., Bonney's Adjust., \$10.00, dis 10c
Hol. Aug., Ives' Expansive, each \$4.50, dis 10c
Hol. Aug., Universal Expansive, each \$4.50, dis 10c
Wood's..... 10c
Gimlet Bits..... 7.50 per gross, dis 10c
Gimlet Bits, Diamond..... 10c and 15c
Double Cut Gimlet Bits, Shepherdson's..... 10c
Double Cut Gimlet Bits, Douglass'..... 10c
Double Cut Gimlet Bits, Ives'..... 10c
Morse's Bit Stock Drill..... 10c
L'Hommedieu's Ship Augers..... 10c

AWLS, BRAD SETS, &c.

Awls, Sewing, Common..... \$1.70—dis 35%
Awls, Shouldered Peg..... \$1.45—dis 40%
Awls, Shouldered Peg..... 35c
Awls, Shouldered Brad, 10 gross 10c—dis 25&10%
Awls, Handled Brad..... 7.50 per gross—dis 10c
Brad Sets, Aiken's..... \$10.00, dis 15c
Brad Sets, No. 42, \$10.50; No. 43, \$12.50, dis 10c
Brad Sets, Stanley's Exc., No. 1, \$12.50, dis 10c
Brad Sets, Stanley's Exc., No. 2, \$14.50, dis 10c
Brad Sets, Stanley's Exc., No. 3, \$17.50, dis 10c

AXLES.

Collins & Co. \$7.00; bevelled.... \$7.35
Lippincott or Mann's.
Single Bit, 4½ to 5½ and under..... \$10.00 net
Single Bit, 4½ to 6 and over..... \$10.00 net
Single Bit, bevelled..... 10c, dor, advance
Double Bit, 4½ to 5½ and under..... \$10.00 net
Double Bit, 4½ to 6 and over..... \$10.00 net
Double Bit, bevelled..... \$1.00 per dor, advance
Second quality Axes..... 75 cts less than above

AXLES.

Sheldon & Co., iron..... 55c off
" " steel..... 55c off
AXLE GREASE—Frazer's..... \$10.50

BALANCES.

Spring Balances..... dia 50%

BELLS.

Hand, Light Brass..... 75c
Hand, White Metal..... 70c
Hand, Silver Chime..... 25c
Hand, Globe (Cone's Patent)..... 25c
Gong, Albee's..... 25c
Gong, Yankees..... 25c
Gong, Barton's..... 40c
Leon Reading..... 40c
Pull, Brook's..... 50c
Crank, Taylor's..... 25c
Lever, Sargent's..... 25c
Bloomfield..... 20c
Lever, R. & E. M. Co.'s..... 45c
Call..... 40c
Cow, Common Wrought..... 55c
Cow, Western, Sargent's List..... 70c
Cow, Kentucky, Sargent's List..... 70c
Cow, Moore's or Dodge's, Genuine Ky., new list;
No. 1 1½ 2 3 5 6 Hog J. dis. 70c
\$10.00 \$12.50 \$14.50 \$15.50 \$17.50
Cow, Texas "Star"..... 50c
BELLOWS.

Blacksmith's Common..... dia 50c
Molder's..... dia 50c
Hand Bellows..... dia 50c

BLIND FASTENERS.

Francis..... dia 20g
MacKrell's..... 10 dor pairs \$1.00, dia 20g
Van Sand's Screw Pattern, \$15 per gross, dia 60g
Van Sand's Old Pattern..... \$15 per gross—dis. 55%
Merriman's..... new list, net
Zimmerman's, 10½ in..... 10 gross \$23.00
Zimmerman's, 9 in..... 10 gross \$30.00

BLIND STAPLERS.

Barbed, ½ in. and larger..... \$10.00 net
Barbed, ¾ in..... \$10.00 net

BLOCKS.

Penfold Blocks..... dia 60c
Bagnall & Loud..... dia 60c

BOLTS.

Cast Iron Barrel Shutter, &c..... dia 70c
Cast Iron Chain (Sargent's list)..... dia 65c
Wrought Barrels..... dia 70c
Wrought Square..... dia 70c
Wrt. Shutter, all Iron, Stanley's list..... dia 60c
Wrt. Shutter, Brass Knob, Stanley's list..... dia 40c
Wrought Shutter, Sargent's list..... dia 60c
Wrought Sunk Flush, Sargent's..... dia 55c
Wrought Sunk Flush, Stanley's..... dia 40c
Wright B. K. Flush, Stanley's..... dia 50c
Carriage and Tire, New list..... dia 70c
Carriage and Tire, Philadelphia Pattern..... dia 75c
Carriage and Tire, Philadephia Pattern..... dia 75c
Carriage Bolts, Clarke's..... dia 75c
Norway..... dia 75c
R. B. & W. Carriage (old list)..... dia 70c
Tire, American, Screw Co.'s, Phila..... dia 25c
Tire, " Bay State"..... dia 65c
Eagle Philadelphia Tire Bolt..... dia 80c
Stove..... dia 67c
Plow..... dia 60c
Machine..... dia 60c
Bolt Ends and Lag Screws..... dia 10c

BORAX.

9c per lb net.

BRACKETS.

Q. S. Backus..... dia to 5
Barber's..... dia 50c
Spofford's Patent..... dia 50c
Ive's Patent Braces..... dia 50c
Common Ball (American)..... 5c. net
Amidon's..... dia 40c

BORING MACHINES—WITHOUT AUGERS.

Sweet & Clark upright, 2.50 angular..... 3.00 net
Lawrence..... 3.00
Hubbard..... 3.00

Phillips, with Augers..... 7.00
BRACKETS.
Shelf, plain..... dia 50c
Shelf, fancy..... dia 50c
BRIGHT WIRE GOODS.
New list..... dia 75c
BULL RINGS.
Union Nut Co. dia 55c
Sargent's..... dia 60c
Humason, Beckley & Co's. dia 70c

BUTTS.

Wrought Brass..... dia 80c
Cast Brass, Fast Joint..... dia 35c
Cast Brass, Loose Joint..... dia 35c
Fast Joint, Narrow..... dia 60c
Fast Joint, Broad..... dia 60c
Loose Joint, Japanned..... dia 50c
Loose Joint, Jap., with Acorns..... dia 50c
Parliament Butts..... dia 50c
Mayer's Hinges..... dia 50c
Loose Pin, no Acorn..... dia 50c
Loose Pin, Acorn..... dia 50c
Loose Pin, Acorn, Jap'd, Plated..... dia 50c
Tips..... dia 50c

WROUGHT IRON.

Fast Joint, Narrow..... dia 70c
Fast Joint, Lt. Narrow..... dia 70c
Fast Joint, Broad..... dia 70c
Loose Joint, Broad..... dia 70c
Table Butts, Back Flaps, &c..... dia 70c
Inside Blind, Regular..... dia 70c
Inside Blind, Light..... dia 70c
Loose Pin, Writ..... dia 50c
Loose Pin, Light..... dia 50c
Spring Hinges—

Geer's Spring and Blank Butts..... dia 30c
Hart Manufacturing Co. dia 60c
American Spring Hinge Co's. dia 25c
Gem Spring Hinges..... dia 25c
Blind Butts, Shepard's, Nos. 50 and 60..... dia 70c
Blind Butts, Shepard's, No. 60c..... dia 70c
Blind Butts, Lull & Porter..... dia 75c
Blind Butts, Huffer..... dia 50c
Blind Butts, Standard..... dia 75c
Standard Lull & Porter..... dia 75c

BOW PINS.

Humason, Beckley & Co's. dia 50c
Sargent & Co's. \$10.70 and 21.40, dis 60c
Hotchkiss..... dia 25c

BUTCHER'S CLEAVERS.

Humason & Beckley Mfg. Co. dia 30c
Bradley s..... dia 25c
Beatty's..... dia 40c
1 2 3 4 5 6 7 8
\$16.50 19.00 21.50 24.00 27.00 30.00 33.50 36.50
CAN OPENERS.

American..... \$1 gross \$3.50
New Idea..... \$15.00 gross
No. 4, French..... \$10.00 dia 25c
No. 5, Iron Handle..... \$1 gross \$6.00, dis 45c
Sardine Scissors..... \$1 gross \$7.00, dia 35c
Sprague, No. 1, \$2; No. 2, \$2.25; No. 3, \$2.50; dia 50c
Universal..... \$10.00 dia 3.00, dia 33½%

CAPS, PERCUSSION, 100.

U. M. C., F. C. trimmed..... 50c
U. M. C., F. L. ground..... 65c
U. M. C., Cen. fire ground..... 70c
U. M. C., Double W. Proof..... \$1.40
G. D. & S. B. 33c. dia 10c
E. B. 1-10, Eley's..... 50c
Musket, in 1-10's..... 55c
Hicks Ground Edge in Brass Boxes..... 55c

CARTRIDGES.

Rim..... dia 60c
Central Fire, pistol size..... dia 40c
" " Military..... dia 30c
B. B. Caps, Round Ball..... 1.00
" Swaged Conical..... 1.75
NEW LIST ON CARTRIDGES.
Rim-fire, 22 short \$3 long \$6.00
" 32 10 15.50
" 38 18 18.00
" 41 15 17.50
Central Fire—32, \$11.00; 38, \$13.50; 41, \$15.00; 44, \$19.
CARDS.

Horse and Curry..... dia 10c
Cotton, new list, Aug. 1883..... dia 10c
Wool, new list, Aug. 1883..... dia 10c
CARPET STRETCHERS.
Cast Steel, Polished..... \$1 dor \$5.00, dia 30c
Cast Iron, Steel Points..... \$1 dor \$2.00, dia 30c
Bullard's..... dia 25c

CASTER.

Bed..... dia 55c
Plate and Shallow Socket..... dia 55c
Deep Socket..... dia 40c
Martin's Patent (Phoenix)..... dia 45c

CHAIN.

German Halter and coil Chain..... dia 60c
Trace, Breast and Fancy..... dia 50c
Oneida Halter Chain (old list)..... dia 45c
Galvanized Pump Chain..... dia 60c
Jack Chain, Iron..... dia 75c
Jack Chain, Brass..... dia 75c

CHALK.

White..... \$1 gross \$5.00
Red..... \$1 gross \$7.50
Blue..... \$1 gross \$9.00 net
White Cravons..... \$1 gross \$13.00 net

COTTON LINES.

Cotton Fish Lines..... dia 40c
Cotton Chalk Lines, so feet: Nos. 0, 1, 2, 3, 4 gu. 20c
6.00. 5.00. 7.00. 7.50. gu. 20c
CHISELS.

Socket Framing, Crossmans..... dia 65c
Socket Firmer, Crossmans..... dia 65c
Socket Framing & Firmer..... dia 75c
Socket, Douglass..... 75c
Socket, Ohio Tool Co..... 75c
Socket, Peck, Stow & Wilcox..... 75c
Sected, Corner..... 75c
Tanged Firmer, Douglass..... dia 40c
Tanged Firmer, Butcher's..... dia 40c
I. Merrill's Socket and Framing Chisel..... dia 65c
CLIPS, AXLE.

Iron, Screw, Kagle..... dia 50c
Iron, Adjustable, Stearns..... dia 20c
Iron, Cabinet, Sargent's..... dia 60c
Iron, Carrage, Carr & Crawley..... dia 25c

COCKS, BRASS.

Norway or Best..... dia 60c
Superior..... dia 45c
Conestoga..... dia 60c
Coal Hods—Griffiths'..... dia 40c

COOKING.

Racking, new list..... dia 55c
Globe, new list..... dia 55c
Plain Bibs..... dia 55c
Ales and Beer, new list..... dia 55c

COUCHES.

Sand and Grain Rhéaume..... dia 55c

COCKS, BRASS.

Globe, new list..... dia 55c

COFFEE GRINDERS.

Mosch Bird Cage..... dia 55c

COFFEE POT.

Wire Counter Railings..... dia 55c

COOKING.

Sand Screen..... dia 55c

COOKING.

Mosch Bird Cage..... dia 55c

COOKING.

Sand Screen..... dia 55c

COOKING.

Mosch Bird Cage..... dia 55c

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COOKING.

Sand Screen..... dia 55c

COOKING.

Mosch Bird Cage..... dia 55c</p

THE MARKETS.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, April 20, 1887.

Despite the restriction caused by the interstate commerce bill, business is to some extent recovering from the first shock, or rather it is adjusting itself as far as possible to the change, though if all the provisions of this nondescript are carried out great injury to trade must be the final result. We believe that the bill will become inoperative, or at least certain portions of it, thus freeing the business interests of the country from such hampering restrictions. In all other ways the outlook is promising, and the country is enjoying a period of great prosperity.

In manufactured iron the market is dull, with sales rather small at present. We quote as before, viz:

Ref. Bar Iron, 2 to 6 $\frac{1}{2}$ to 1.....	\$2.30@2.50c
" " 1 to 4 $\frac{1}{2}$ to 1 to 1.....	\$2.30@2.50c
" " 1 to 2, round and square.....	2.20@2.50c
Hoop Iron, 1 $\frac{1}{2}$ wide and upward.....	2.60@3 c
Band Iron, from 1 $\frac{1}{2}$ to 6 in. wide.....	2.50@3 $\frac{1}{2}$ c
Horseshoe Iron.....	3 @ 3 $\frac{1}{2}$ c
Norway Nail Rods.....	4 $\frac{1}{2}$ @3 $\frac{1}{2}$ c
Black Diamond Cast Steel.....	5 $\frac{1}{2}$ @10 c
Machinery Steel.....	3 @ 4 $\frac{1}{2}$ c
Spring Steel.....	3 $\frac{1}{2}$ @4 c
Common Horse Nails.....	8 @ 9 c
Railroad Spikes, 5 $\frac{1}{2}$ x9-16.....	2 $\frac{1}{2}$ @3 c
Steel Boiler Plate.....	3 $\frac{1}{2}$ @4 $\frac{1}{2}$ c
Iron Boiler Plate.....	2 $\frac{1}{2}$ @4 c
Boiler Tubes.....	42 $\frac{1}{2}$ off list

The volume of sales of pig iron is somewhat larger, but the market continues quiet. Prices generally are about the same and we quote as follows:

Baltimore Charcoal Wheel Iron (all Baltimore ore).....	\$18.00@29.00
Virginia C. B. Charcoal Wheel Iron.....	27.00@29.00
Ambrosite, No. 1.....	28.00@23.00
" " 2.....	19.00@21.00
" " 3.....	17.00@19.00
Mottled and White.....	14.00@15.00
Old Rails.....	—@23.00
Old Steel Rails.....	22.50@23.00
No. 1 Wrought Scrap.....	23.00@24.00
Old Car Wheels.....	17.50@18.50

HARDWARE.

The market remains unchanged, previous quotations remaining the same, notwithstanding slight decline in iron, which has a tendency to curtail purchases, except for immediate wants. Had it been possible to maintain the market on raw material there would now be nothing to prevent a healthy demand for manufactured goods of all lines, as stocks in dealers' hands are comparatively small. A feeling of confidence in values would be all the stimulant necessary to insure an active season. From Southern correspondents in the far South we learn that the operations of the interstate commerce bill is interfering with business.

There has been a big break in nails and quotations are about \$2.25@2.35, but it is difficult to give exact prices, as there is so much cutting.

Philadelphia Iron Market.

PHILADELPHIA, April 19, 1887.

The week's business in iron and steel has been disappointing, but when we consider the reasons for the light volume there is no occasion for dissatisfaction.

The business of the entire country has been more or less interfered with by the new freight rates, which seem to be more arbitrary and unjust than ever. Three concerns in this city have been obliged to shut down, to say nothing of a dozen or more temporary suspensions by a number of smaller industrial establishments. Very few think that the trouble will be lasting. Something is wrong, and the manufacturers and shippers are extremely anxious to find out why a law intending to be of benefit should actually interrupt business.

Late last week quite a number of inquiries were received for foundry and forge iron, both from local and outside sources. Buyers will be in need shortly for large supplies of both kinds, and will no doubt be ready to close as soon as they can know the cost of delivery.

Foundry iron is quoted at \$20 to \$20.50 for best No. 2, \$21 to \$22 for best No. 1, \$19

for best forge, with 50 cts. to \$1 off for lower grades.

Bessemer iron has been inquired for by several large consumers, but the American product is relied upon on account of the high ocean freight rates, which the active demand for tonnage has brought about. Fortunately the large consumers of foreign material are pretty well supplied. Spiegleisen is quoted at as high as \$28; Bessemer at as high as \$21; foreign slabs \$31.50. Old T rails are quoted at \$23 for spot lots, though 50 cts. less has been taken in two or three cases lately.

The best offers for future shipments are \$22. Steel rails are quoted at \$40, but no business of any amount has been reported. Large railroad builders expect to place heavy orders in foreign markets, but have been deterred lately by high ocean freight rates.

Merchant bar iron has been shaded slightly, and 2 to 2.15 cts. represents the extremes of medium and refined iron. Very little business is coming in at this slight concession. Nails have been shaded as much as 10 to 15 cts., but the makers report excellent prospects for stronger prices as soon as all things harmonize. The bridge builders are loaded up, and the plate iron makers have fair prospects for an active demand.

Cincinnati Iron Market Report.

Specially reported by ROGERS, BROWN & CO., Pig Iron Commission.

CINCINNATI, April 18, 1887.

In spite of the fact that freight rates are in a perfect chaos, local pig iron dealers are booking some orders and making a hard struggle to deliver the iron. The new law has been in effect two weeks, and the only rates issued are to a few leading points, and mainly confined by each road to places on its own line. Practically, therefore, the movement of pig iron freight is at a standstill. It has become apparent that so far as low-class rates are concerned, the railroads are expecting to use the new law as a pretext for largely advancing rates. The first effect is demoralizing to all manufacturing and shipping connected with the iron industry. Notwithstanding this cloud and the threatened general strike in the stove trade, prospects continue good for heavy consumption for some time to come. Railway journals that have been making a specialty of collecting facts relating to railroad construction are authority for the statement that 15,000 miles of new track and about the same amount of old track will probably be laid this year. This is vastly in excess of any previous record. That if even a large share of it is realized, the consumption of crude iron for track, equipment and materials will be enormous. We revise our quotations to suit transactions of the week:

HOT-BLAST FOUNDRY.	
Ohio and Southern Strong Coke No. 1.....	\$21.50@22.00
" " " " No. 2.....	21.00@21.00
" " " " No. 3.....	20.00@20.50
Ohio Soft Stonecoal, No. 1.....	21.00@21.00
Ohio Soft Stonecoal, No. 2.....	19.50@21.00
Mahoning and Shenango Valley Coke, No. 1.....	23.00@24.00
Hanging Rock Charcoal No. 1.....	24.00@25.00
" " " " No. 2.....	23.50@24.00
Tennessee & Alabama Charcoal No. 1.....	22.00@23.00
" " " " No. 2.....	21.00@22.00
FORGE.	
Strong Neutral Coke.....	\$19.50@20.00
Mottled " "	18.50@19.00
Cold Shortnings.....	18.50@19.00
CAR WHEEL AND MALLEABLE.	
Southern Car-Wheel Iron.....	26.00@28.00
Hanging Rock Cold Blast, No. 1.....	27.00@28.00
Hanging Rock Cold Blast, No. 2.....	24.00@25.00
Lake Superior Malleable.....	27.00@28.00
SPECIALLY REPORTED BY E. L. HARPER & CO.	
CINCINNATI, April 18, 1887.	
No change in the market since our last report. We quote for cash on wharf or cars here:	
FOUNDRY.	
Hanging Rock Charcoal, No. 1.....	\$23.50@24.00
" " " " 2.....	22.50@23.50
" " " " 3.....	23.50@24.50
Strong Neutral Coke, " " " " 1.....	22.50@23.00
" " " " 2.....	21.50@22.50
American Scotch, " " " " 1.....	20.00@21.00
GREY FORGE.	
Virginia Neutral Coke.....	19.50@20.50
Cold Short.....	19.00@19.50
CAR WHEEL AND MALLEABLE.	
Hanging Rock, strictly cold blast.....	27.00@28.00
Hanging Rock, strictly warm blast.....	23.00@26.00
" Cranberry," N. Carolina warm blast.....	—@26.00
Ashmont and Virginia warm blast.....	25.00@26.00
Lake Superior Charcoal, all grades.....	26.00@27.00

Specially reported by E. L. HARPER & CO.

CINCINNATI, April 18, 1887.

No change in the market since our last report. We quote for cash on wharf or cars here:

FOUNDRY.

Hanging Rock Charcoal, No. 1.....	\$23.50@24.00
" " " " 2.....	22.50@23.50
" " " " 3.....	23.50@24.50
Strong Neutral Coke, " " " " 1.....	22.50@23.00
" " " " 2.....	21.50@22.50
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GREY FORGE.	
Virginia Neutral Coke.....	19.50@20.50
Cold Short.....	19.00@19.50

CAR WHEEL AND MALLEABLE.

Hanging Rock, strictly cold blast.....	27.00@28.00
Hanging Rock, strictly warm blast.....	23.00@26.00
" Cranberry," N. Carolina warm blast.....	—@26.00
Ashmont and Virginia warm blast.....	25.00@26.00
Lake Superior Charcoal, all grades.....	26.00@27.00

Parker's.....	dis 45
Wilson's.....	dis 40@10
Logan & Strobridge.....	dis 45
Enterprise Mfg. Co.....	dis 25
COMPASSES, DIVIDERS, &c.	
Compasses.....	dis 10@10
Calipers.....	dis 7@10
Dividers.....	dis 7@10
Cook's Pencil.....	dis 10
COOPERS TOOLS.	
Bradley's.....	dis 10@10
Barton's.....	dis 10
CROW BARs.	
Cast Steel.....	2@3 $\frac{1}{2}$ c
Iron, Steel Points.....	2@3 $\frac{1}{2}$ c
CURLING IRONS, &c.	
16, 18, 24 in., \$1.50, 2.00, 2.50.....	dis 10
Curling Tongs.....	2@ doz 3.65, dis 10
Pinching Irons.....	2@ doz 3.50, dis 10
CURRY COMBS.	
Fitch's new list.....	dis 50@10
Hotchkiss, Novelty, new list, July, 1886.....	dis 25
Hotchkiss, Excelsior Superior Champion.....	dis 25
Lawrence, " Perfect".....	dis 25@10
Rubber.....	dis 10@10
Sweet & Clarke.....	dis 30@10
Lusters.....	dis 25@10
CURTAIN PINS.	
Silvered Glass.....	net
White Enamel.....	net
CUTLERY.	
Association (Table).....	net
Naugatuck Cutlery Co.....	list net
Excelsior Knife Co.....	net
Wilson's Butcher and Shoe Knives.....	dis 30
Ames' Shoe Knives.....	dis 20
Wm. Rogers Mfg. Co., Plated Cutlery.....	Net
DOG COLLARS.	
Embossed Gilt.....	dis 30
Leather.....	dis 40
Bras.....	dis 40
DOOR SPRINGS.	
Torrey's Rod, regular size.....	2@ doz 3.50, dis 10
Gem (Coil): List, April 19, 1886.....	dis 10
Standard—10 doz \$1.25; 9 doz \$1.75; 8 doz 2.50; 6 doz 3.50.....	dis 60@10
Hercules.....	dis 50@10
DRAWING KNIVES.	
Middlesex Mfg. Co.....	dis 75
Crossman's No. 1.....	dis 65@5
Nobles Mfg. Co.....	dis 15
Bradley's.....	dis 35
Adjustable Handle.....	dis 20
P. S. & W.....	dis 75
Douglas.....	dis 75
DRILLS AND DRILL STOCKS.	
Blacksmiths' Self-Feeding.....	dis 1.65 net
Breast, P. S. & W.....	each, 7.50, dis 20
Breast, Wilson's.....	dis 40
Breast, Miller's Falls.....	each, \$3.00, dis 25
Breast, Bartholomew's.....	each, \$4.50, dis 25@10
Automatic Boring Tools.....	dis 1.85 each
Manneur Drill Mfg. Co—Model Beach Drill.....	\$10.00, dis 50
XXX Post Drill.....	\$28.00, dis 50
EGG BEATERS.	
Dover.....	2@ doz 2.50, dis 2
Acme.....	gross, \$9.00
Victoria.....	gross, \$10.00
EMERY AND EMERY PAPER.	
Regular numbers.....	2@ doz 6
Flour and F. F. B. & A. Emery Paper.....	2@ doz 10
ENAMELED AND TINNED WARE.	
Kettles.....	dis 50@10
Sauce Pans.....	dis 50@10
Tinned Sauce Pans.....	dis 50@10
Eacutecheon Pins—Brass.....	dis 50
ESCUCHERONS.	
Door Lock.....	Same discounts as Door Locks
Brass Thread.....	dis 60
Wood.....	dis 25
FAUCETS.	
Fenn's.....	dis 40
Fenn's Cork Stops.....	dis 33@5
Star.....	dis 60
Frary's Patent Petroleum.....	dis 40
West's Patent Key.....	dis 50
Anchor Lock.....	dis 45
Metallic Key, Leather Lined.....	dis 55@10
Cork Lined.....	dis 70
J. Sommer's Best Metallic Key.....	dis 40@10
J. Sommer's Cork Lined, 1st quality.....	dis 50
FILES.	
E. M. Boynton's.....	new list, dis 25
Western File Co.....	dis 60@10
Butcher's.....	dis 45 to 50
Moss & Gamble.....	dis 45 to 50
H. Diston & Sons (new list).....	dis 60
Heller Bros' Horse Rasp.....	dis 20@10
Nicholson.....	dis 60@10
New American.....	dis 60@10
Union File Co.....	dis 60@10
Stubs, new list.....	dis 50 to 60, 25 off
FLUTING MACHINES.	
Knox, 4 $\frac{1}{2}$ -inch Rolls.....	\$3.50
Knox, 6-inch Rolls.....	\$4.00 each
Knox, 8-inch.....	dis 35
Eagle, 3 $\frac{1}{2}$ -inch Roll.....	\$4.15, dis 35
Eagle, 5 $\frac{1}{2}$ -inch Roll.....	\$4.85, dis 35
Crown, 4 $\frac{1}{2}$ -in., \$3.50; 6, \$4.00; 8, \$6.50.....	each, dis 35
Crown Jewell.....	6-in., \$3.40 each, dis 35
Domestic Fluter.....	\$4.50 each, net
Geneva Hand Fluter, White Metal, 2@ doz \$12 to 25	dis 35
Crown Hand Fluter, Nos. 1, \$15; 2, \$18.50; 3, \$10.50; 4, \$8.50; 5, \$6.50.....	dis 35
Combined Fluter and Sad Iron, 2@ doz 15.00, dis 30	8
FIRE PANS.	
Burnished list follows.....	dis 70
No. o 1 2 3 4 5 6 7 8	dis 70
2@ doz \$3.00 3.75 4.25 5.25 6.00 7.00 8.00 9.00	9
GAUGES.	
Marking, Stanley's.....	dis 60
Marking, Chaplin's.....	dis 60
Wire.....	dis 10@10
Wire, Disston's.....	dis 20
Wire, Wheeler, Madden & Co.....	dis 10
GIMLETs.	
Nail and Spike.....	dis 30
" Eureka" Gimlets.....	dis 40@10
" Diamond" Gimlets.....	dis 40@10
Double Cut, Shepardson's.....	dis 45
Double Cut, Hartwell's.....	dis 50
Double Cut, Ives'.....	dis 50@10
Double Cut, Douglass'.....	dis 40
" Real".....	2@ doz 6.00 dis 15
HORSE NAILS.	
B	

Louisville Iron Market.

Specially reported by W. B. BELKNAP & Co., Nails, Wire, Iron, Hardware, Carriage and Wagon Goods.

LOUISVILLE, KY., April 18, 1887.

Bar iron is firm and in good demand, mills making no concessions worth speaking of.

Hoops and bands.—Somewhat easier; at any rate, mills seem to want orders.

Sheet.—A trifle easier, concessions being offered by the smaller mills.

Nails.—As intimated above, there has been a decided decline from the high figures which never prevailed outside of the association meeting. The last two advances were made, not because the market justified, but largely to make good the guarantee of brokers, factors and agents for the mills, who, in putting out boom circulars and in other ways, stimulated trade and committed the mills to higher figures.

Specially reported by G. H. HULL & Co., Commission Merchants for the sale of Hot and Cold Blast Pig Iron.

LOUISVILLE, KY., April 18, 1887.

The market is quiet and sales small. The inquiry from the interior is larger than at any time during the last two months, and indicates that some consumers are running short of iron. The furnaces, on the other hand, are accumulating little or no iron, except of irregular grades, and it seems altogether likely that the current inquiry for monthly consumption will take up the surplus as it is now offered. Any large lots placed on the market, or any inquiry for large lots, would affect prices one way or the other, but neither of these contingencies seem likely to occur, as furnaces are sold largely ahead. We revise our quotations as below:

PIG IRON.

Southern Coke, No. 1 Foundry.....	\$12.00@\$12.50
" " " "	\$10.00@\$10.50
" " " "	\$10.50@\$10.50
Hanging Rock Coke, No. 1 Foundry.....	\$10.50@\$10.50
Southern Charcoal, No. 1 Foundry.....	\$10.50@\$10.50
Silver Gray, different grades.....	\$10.00@\$10.50
Southern Coke, No. 1 Mill, Neutral.....	\$10.00@\$10.50
" " " "	\$10.00@\$10.50
" " " " Cold Short.....	\$10.00@\$10.50
Southern Charcoal, No. 1 Mill.....	\$10.00@\$10.50
White and Mottled, different grades.....	\$10.00@\$10.50
Southern Car Wheel standard brands.....	\$10.00@\$10.50
" " " other brands.....	\$10.00@\$10.50
Hanging Rock Cold Blast.....	\$10.00@\$10.50
" Warm ".....	\$10.00@\$10.50

Chicago Iron Market.

Specially reported by ROGERS, BROWN & CO. W. W. BACKMAN, Resident Agent.

CHICAGO, April 18, 1887.

Business in pig iron continues in a state of suspense. The new freight rates from Chicago that are announced are in the main so high as to completely check trading. For example, the rate to Minneapolis and St. Paul has for years been \$2 per ton during time of lake navigation, and \$2.50 per ton in the winter. It is now advanced to \$4.50 per ton. Consumers cannot believe that such rates can long be maintained, and will buy nothing unless compelled to. A still greater hindrance to business is the absence of any freight rates whatever to many consuming points. The railroads claim to be doing all possible to bring order out of chaos, but the heavy advance in freight rates are in very many cases arbitrary, and not required under the provisions of the new law. As might be expected in this situation, prices are higher on some kinds, and lower on others where prompt sale has to be forced. We quote for cash f. o. b. cars Chicago:

COKE AND STONE COAL FOUNDRY.

Ohio (Hanging Rock) Softeners No. 1.....	\$12.50@\$13.50
" Blackband ".....	\$12.50@\$14.00
" Jackson county ".....	\$12.50@\$13.00
" Lake ore and cinder ".....	\$12.50@\$12.00
Southern Coke, No. 2.....	\$12.00@\$12.50
" No. 2½ ".....	\$12.00@\$12.50
" No. 3 ".....	\$12.00@\$12.50

CHARCOAL FOUNDRY.

Lake Superior.....	\$12.00@\$14.00
Southern.....	\$12.00@\$14.00
Hanging Rock.....	\$12.00@\$14.00

CAR WHEEL AND MALLEABLE.

Lake Superior.....	\$12.00@\$14.00
Standard Southern.....	\$12.00@\$14.00
Hanging Rock, cold blast.....	\$12.00@\$14.00

OLD MATERIALS.

Old Rail, American.....	\$12.50@\$13.50
Old Wheels.....	\$12.00@\$13.00

St. Louis Iron Market.

Specially reported by ROGERS, BROWN & CO., Gay Building, 204 N. 3rd street, St. Louis. W. H. SHIELDS, Manager.

ST. LOUIS, April 18, 1887.

There has been a pretty full run of car-load and trifling orders during the week, indicating that a good many foundries are running close upon stock and are obliged to replenish, whatever may be freight rates; but in the confused general situation any larger trading is rendered well-nigh impossible. Very few freight rates are yet furnished by the railroads, except to points on their own lines. Pro-rating arrangements are all in a muddle. Price are maintained, and some furnaces have advanced them to cover the increased rates. Our quotations are for cash f. o. b. St. Louis:

HOT-BLAST CHARCOAL.

Missouri.....	\$12.00@\$12.50
Southern.....	\$12.00@\$12.50

COKE AND COAL.

Southern No. 1.....	\$12.00@\$12.50
Southern No. 2.....	\$12.00@\$12.50
Ohio Softeners.....	\$12.00@\$12.50

MILL IRONS.

Missouri.....	\$12.00@\$12.50
Southern No. 2.....	\$12.00@\$12.50

CAR-WHEEL AND MALLEABLE IRON.

Southern.....	\$12.00@\$12.50
Lake Superior.....	\$12.00@\$12.50

MISCELLANEOUS.

Old Wheels.....	\$12.00@\$12.50
Old Rail.....	\$12.00@\$12.50
Connellsville Coke (Frick's).....	\$12.00@\$12.50

Chattanooga Iron Market.

Specially reported by LOWE & TUCKER, Brokers and Commissioners.

CHATTANOOGA, TENN., April 18, 1887.

Trade for the past week has not recovered from the embarrassment forced upon it by the operation of the interstate commerce bill. The railroads, hampered as they are, find it impossible to meet the wants of the manufacturers or merchants. As things stand now neither buyer or seller can make any calculations upon the cost of goods laid down; as it is neither merchant or producer can make intelligent answers to their customers upon any class of goods. Were it not for these features of the situation, trade in all lines would be simply immense. The demand for pig iron is good, but prices somewhat demoralized. We make quotations to-day about \$18 for No. 1, \$17 for No. 2, and \$15 and \$16 for grey forge. Departures from these figures depends upon the quality and reputation of the iron. The demand for all classes of building material is very great. All the mills through the country are running to their fullest capacity, and hardware merchants are having all they can attend to in filling orders for this class of goods. Railroad building through the South has the appearance of taking a new impetus and several important lines are being laid out, and the parties who are taking hold of them are men of ample means to see them through.

THE American House, Boston, is adding every day to its fame and popularity as one of the best hotels in the East. There is no pretentious display, but everything is of the very best, and a desire to please is apparent in every department.

IF you go to New York you will find the Grand Union Hotel, opposite the Grand Central Depot, a good place to stop. You can get an excellent room for \$1.00 a day. The restaurant is first-class and moderate in price. The fact that it is always full is the best argument in its favor.

FOR boiler fronts there is nothing equal to Dixon's Silica-Graphite Paint. It is a beautiful black, and will not burn off. Boiler fronts painted three years ago are as good to-day as when painted. Address Jos. Dixon Crucible Co., Jersey City, N. J.

ICE CREAM FREEZERS.

Peerless—3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7; 8 quart, \$9; 10 quart, \$12. Giant, with fly wheel, —14 quart, \$80; 18 quart, \$125; 21 quart, \$130; \$135; 32 quart, \$160; 48 quart, \$185 Discount, 50% to 5%.

American—2 quart, \$1.75; 3 quart, \$3.25; 4 quart, \$3.75; 6 quart, \$5; each.....dis. 45 %

Crown, single action, a quart, \$1.75; 3 quart, \$3.50; 4 quart, \$4.25; 6 quart, \$5; each.....dis. 60 %

Stair, double action, with crank, 3 quart, \$1.50; 10 quart, \$1.50; 14 quart, \$1.50; 18 quart, \$1.50; 24 quart, \$1.50. With fly wheel, 3 quart, \$1.75; 10 quart, \$1.75; 14 quart, \$1.75; 18 quart, \$1.75; 24 quart, \$1.75; 32 quart, \$1.75.

Star, double action, a quart, \$1.75; 3 quart, \$3.50; 4 quart, \$4.25; 6 quart, \$5; each.....dis. 60 %

Door Por., 3 quart, \$1.75; 6 quart, \$3.50; each.....dis. 60 %

Door Por. Jap'd.—Same discounts as Door Locks.

Door Por. Plated.—Same discounts as Door Locks.

Furniture Plain.....75¢ gross inch, dis. 10 %

Wooden Nails.....dis. 25 %

Picture.....dis. 10 %

Hemacite, Picture.....dis. 15 %

Shutter, Porcelain.....dis. 6.5 %

LADLES.....

MELTING & SKIM'NG, Monroe's Pat. \$1.00 dis. 55 %

Melting, C & C.....dis. 20% to 10 %

LANTERNS.....

Owl, Tubular, \$1.00.....\$6.50 net

LAWN MOWERS.

Acme Buckeye, Easy & Excelsior, new list, dis. 40% to 10 %

Linen Fish.....dis. 50 %

Wire Clothes, Galvanized, 100 feet.....\$1.00 dis. \$3.00

LOCKSMAN LATCHES.

Cabinet, Eagle.....Changes made in list price

Cabinet, Gaylord.....of some numbers Jan. 1,

Cabinet, Bridgeport.....\$1.85, dis. 50 %

Trunk, new list, Jan. 1, 1887.....\$1.50 dis. 40 %

Vale Lock Co., Flat Key.....dis. 40 %

Plate.....dis. 33 1/2 % & 1/2 %

DOOR LOCKS, ETC.

Bradford.....

Vorwalk.....

Norwich.....

P. & F. Corbin.....List prices as revised

Russell & Erwin.....Dec. 18th, 45% & 2 %

Mallory, Wheeler & Co.....for cash.

Nimick & Brittan Mfg. Co.....

Baldock—Russell & Erwin.....

Mallory, Wheeler & Co.....dis. 75 %

Nimick & Brittan Mfg. Co.....and 2% for cash.

Wm. Wilcox & Co.....

Wm. Wilcox & Co.'s Plate Locks.....dis. 33 1/2 % & 1/2 %

Yale Lock Manf. Co.'s "Standard".....dis. 40 %

Romer's.....dis. 25 @ 40 %

Conestoga.....dis. 80 & 10 %

Scandinavian, "Norwich".....dis. 90 %

Nimick & Brittan's Burial-Proof Locks.....dis. 90 %

MALLETS.

Penfield Block Co., Apple, Hickory and Lignumvitae.....dis. 30 %

Ripley Mfg. Co.....dis. 30 %

MEAT CUTTERS.

American.....\$15.00 \$17.00 \$19.00 \$21.00 \$23.00

American, B. 50.00; 5, 56.00.....dis. 30 %

Oixon's (P. S. & W.) Nos. 1, 2, 3, 4.....

Perry's, Nos. 1, 2, 3, 4, 5 gr'd.....5 gr'd

Each.....\$2.50 \$3.00 \$3.50 \$4.00 \$4.50

Woodruff's (P. S. & W.) Nos. 100, 150.....

Hales.....\$1.00 \$1.25 \$1.50 \$1.75 \$2.00

Nos. 11, 12, 13.....\$1.75 \$2.00 \$2.25 \$2.50

Kieser's No. 55.....\$40.00 \$40.00 \$40.00

Kieser's Gem.....\$25.00 \$25.00 \$25.00

Kieser's No. 82.....\$40.00 \$40.00 \$40.00

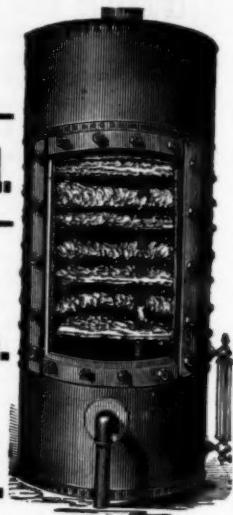
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The Only Lime Extracting Heater That Will Prevent Scale in Steam Boilers.

Removing all impurities from the water before it enters the boiler.

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This cut is a facsimile of the appearance of a No. 5 Heater at work on ordinary lime water, when the door was removed after the Heater had been running two weeks. **Illustrated Catalogue Free.**



STILWELL & BIERCE MFG. CO., DAYTON, O.

SILVER PLATED WARE.	
Wm. Rogers Manf. Co.	dis 50 & 10
Holmes, Booth & Hayden	dis 50 & 10
Wallace's Steel Silver Plated	dis 33 1/2 & 10
Rogers Bros 1847	dis 50 & 5
C. Rogers & Bro.	dis 50 & 10

SCREWS. Standard new list, Feb. 15.

Flat Head Bright	75
Round Head Blued	70
Round Head Bright	70
Flat Head Brass	70
Round Head Brass	65
Flat Head Blued (add 5% to net)	75
Continental Flat Head	80
Brass and Silver Capped	40
Japanned Flat Head	40
Coach, Patent Gimlet Point	dis 66 1/2
Coach, Common or Lag	dis 70
Bed	dis 25
Machine, Flat Head, Iron	dis 55
Machine, Round Head, Iron	dis 55
Bench, Iron	dis 55 & 10
Bench, Wood, Beach	dis 20 & 25, dis 10 & 5
Bench, Wood, Hickory	dis 20 & 25
Hand, Wood	dis 25 & 10
Hand Rail, Sargent's	dis 60 & 10
Hand Rail, Humason, Beckley & Co.'s	dis 40 & 10
Hand Rail, Am. Screw Co., list Jan. 1, '81	dis 70
Jack (Wilson's)	dis 25

SCREEN FRAMES AND FIXTURES.

Standard Window Screens	No. 1, 1/2 doz	2, 5
"	No. 5, 1/2	dis 50 & 10
"	Door	dis 50 & 10
"	Window Corner Irons, No. 3, doz. st's,	5
"	Door	dis 50 & 10
"	Door Latches, 1/2 dozen, \$3.60.	dis 50

Porter's Patent Window and Door Screen Frames:

	PER DOZ. SETS.	PER DOZ.
White, Walnut.	\$2.75	\$3.25
No. 20.	\$2.75	\$3.25
No. 21.	3.25	4.00
No. 22.	3.50	4.75
No. 23.	6.00	7.50
No. 24.	9.00	11.00

Porter's Corners—

No. 0. Corners and Sticks complete for a three-foot window, 1/2 doz sets	\$4
No. 1. Set for Window, 1/2 doz sets Bronzed, 1/2 doz sets, Nickel, \$5.60	
No. 1 1/2. " 1/2 doz sets, Bronze, Nickel, \$7.50	
No. 4. " 1/2 doz sets, Bronze, Nickel, \$8.00	
No. 4 1/2. " or door, 1/2 doz sets, Bronzed, \$1.10; Nickel, \$3.00	
No. 4 1/2. " or door, 1/2 doz sets, Bronzed, \$1.00; Nickel, \$4.00	
No. 5 1/2. " door, 1/2 doz sets, Bronzed, \$6.75; Nickel, \$15.00	
No. 3. " 1/2 doz sets, Bronzed, \$1.00; Nickel, \$4.00	

Boughton's Adjus. Window and Door Screens, dis 25

Boughton's Adjus. Window and Door Frames, dis 20

Window screen frames (Stuart's), dis 25

SHEAVES AND SCISSORS.

American (Cast) Iron	dis 70 & 10
Pruning	see Pruning Hooks and Shears
Barnard's Lamp Trimmers	dis 24.00
Tinners	dis 20
Massachusetts	dis 80 & 10
Seymour's	dis 60 & 10
Jersey Shears	dis 80
J. Wiss & Son. Nickel, 50 & 5; Japanned, 60 & 10	

SHEAVES.

Sliding Door, M. W. & Co., List	dis 45 & 2
Sliding Door, R. & E. list	dis 60 & 2
Sliding Door, Patent Roller	dis 60 & 10 & 2
Sliding Door, Pt. Roller, Hatfield's	dis 60 & 10 & 2
Sliding Door, Russell's Anti-Friction	dis 60 & 10 & 2

Also see Hangers.

SHOVELS AND SPADERS.	
Ames, New List, November 1, 1885	dis 20
Griffiths	dis 50 & 5
Remington's (Lowman's Patent)	dis 20
Rowland's	dis 60
Lippincott, new list	dis 25
Hussey, Bins & Co.	dis 25

SILVER PLATED HOLLOW WARE.

Wm. Rogers Manf. Co.	dis 50
Meriden Brittanica Co.	dis 40

SOLDERING IRONS AND COPPERS.

Covert's Soldering Irons	dis 35
Covert's Adjustable Coppers	dis 35
SPoons.	

Britannia	dis 60, 10 & 10
Tinned, Iron, Table and Tea	dis 65
Tinned, Iron Basting	dis 30
German Silver	dis 40 & 5

STONE.

Hindostan No. 1, 4c.; Axe, 5c.	net
Sand Stone	1/2 lb., 6c., dis 33 1/2 & 10
Washtita Stone	No. 2, 1/2 lb., 25c. net.
Washtita Stone, Slips	No. 1, 1/2 lb., 45c. net.
Arkansas	1/2 lb., net.

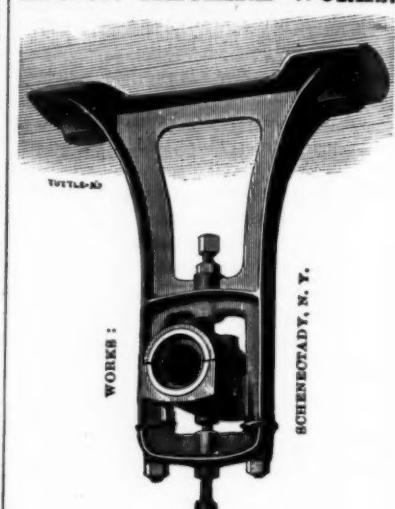
SQUARES.

Steel	dis 60 & 10
Iron	dis 60 & 10
full cases, dis 70 & 10	
Nickel Plated	add 50, 50 & 10
Try Square and T Bevels	dis 50 & 5
Douglas's Try Square and T Bevels	dis 40

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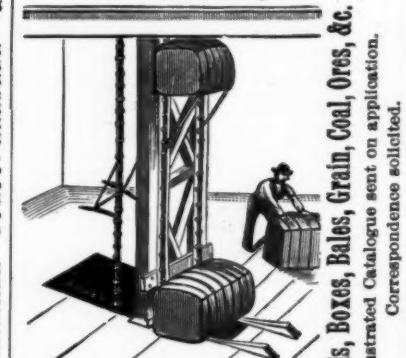
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The Centennial Water Cut-Off, FOR CISTERNS.

It is the only Cut Off that can be used in any position without extra pipe. Try them and you will use no other. For sale by the trade. Ask your jobber for them.

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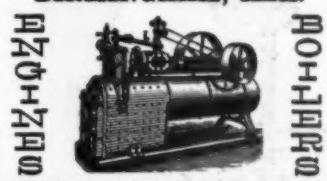
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GENUINE
FRENCH BUHR STONES.
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Three sizes, from 1 to 5 horse
power. Suitable to any
Power. Satisfaction guar-
anteed. Prices low. Descrip-
tive Circular FREE. Mention this paper. Address
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Having purchased special machinery for use in our Pump and Fire Engine Factory, we offer For Sale New and Second-Hand Lathes, Drills and other Tools, which we will close out at a bargain.

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SCREW-CUTTING FOOT LATHE
Foot and Power Lathes, Drill Presses, Scroll-saw Attachments, Chucks, Mandrels, Twist Drills, Dogs, Calipers, etc. Lathes on trial. Lathes on payment.

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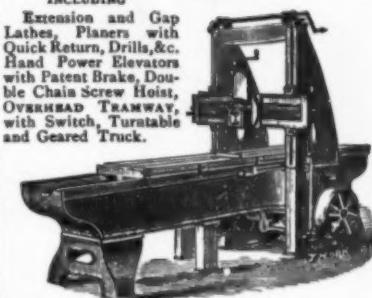
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Iron Working Machinery,

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Extension and Gap
Lathes, Planers with
Quick Return, Drills, &c.
Hand Power Elevators
with Patent Brake, Double
Chain Screw Hoist,
OVERHEAD TRAMWAY,
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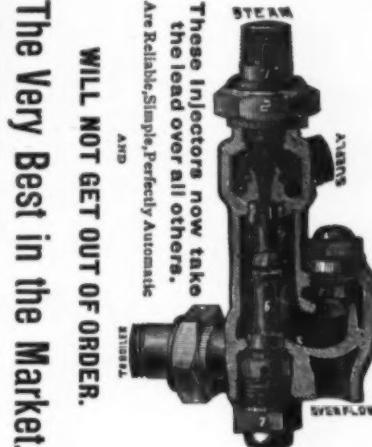


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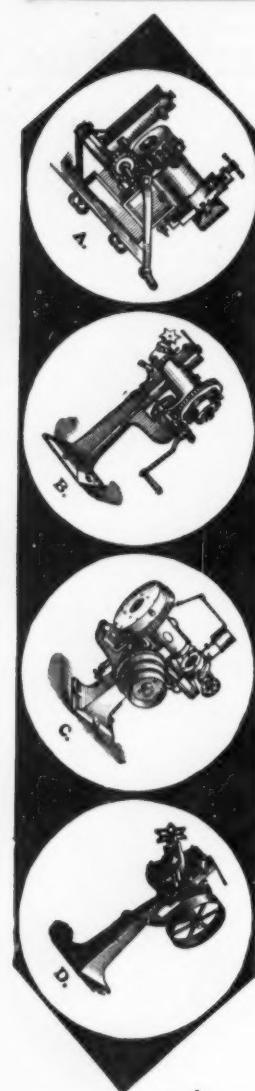
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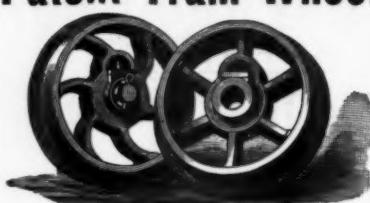
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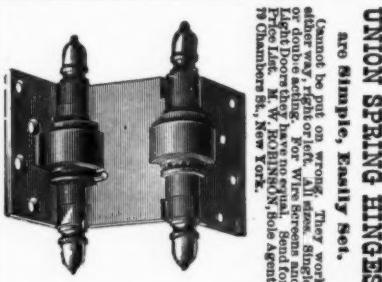
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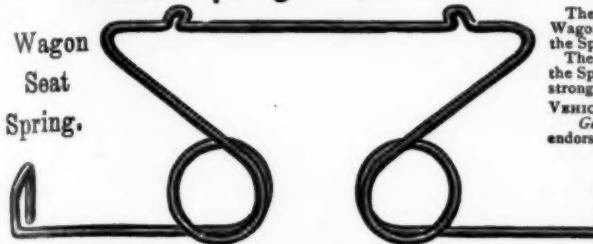
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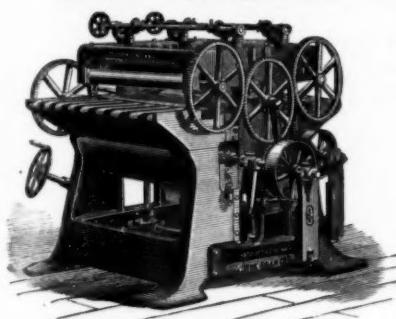
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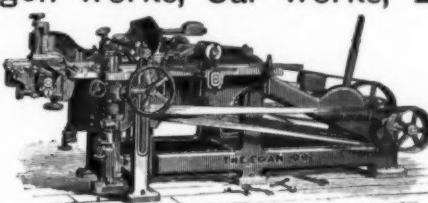
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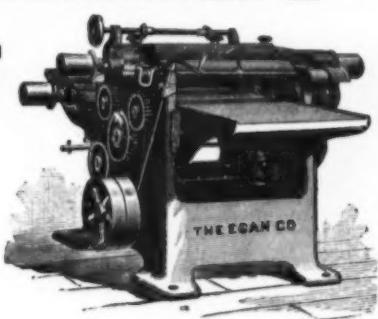


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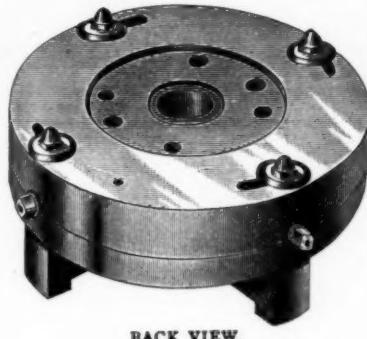
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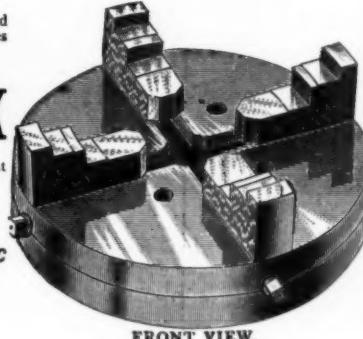
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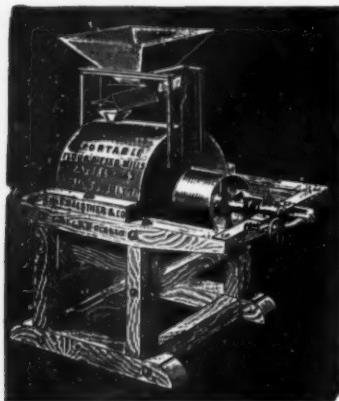
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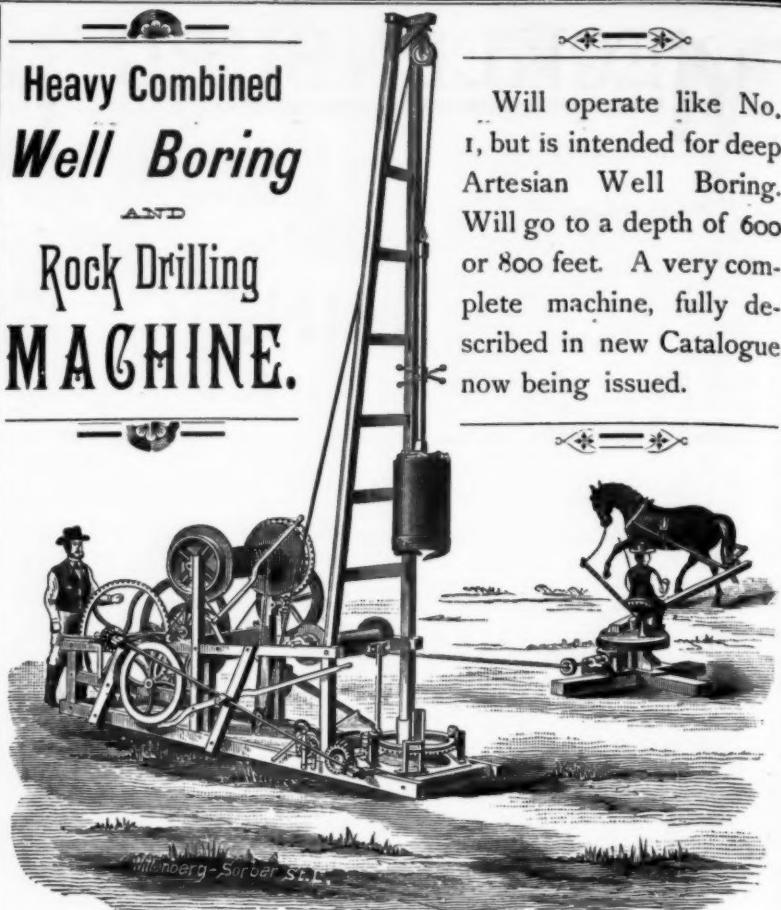
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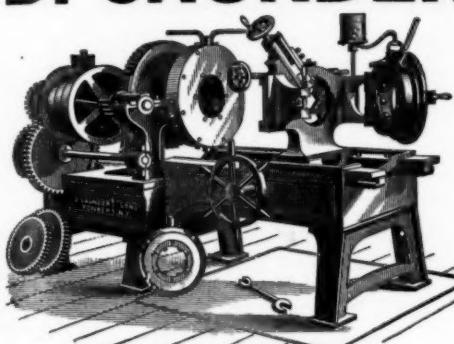
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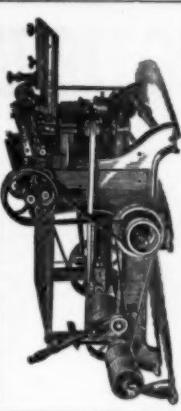
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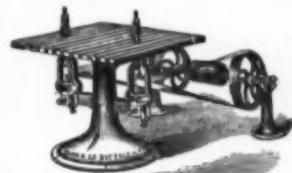


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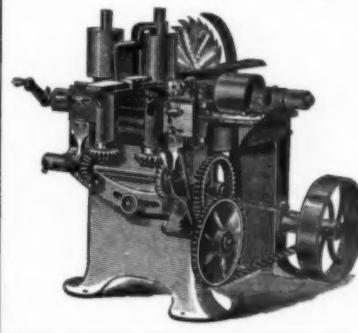
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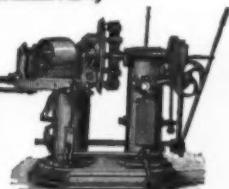
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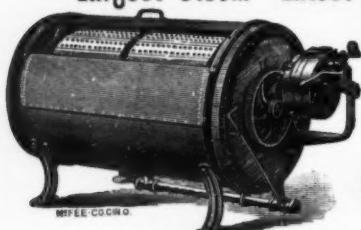
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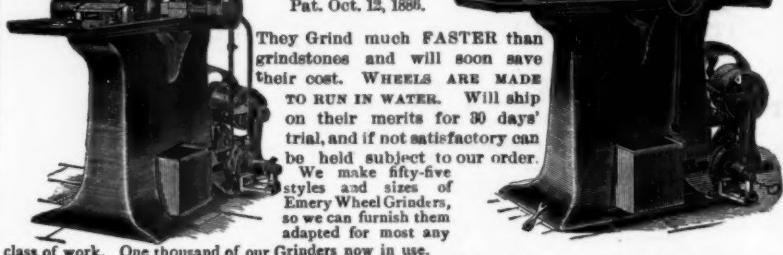
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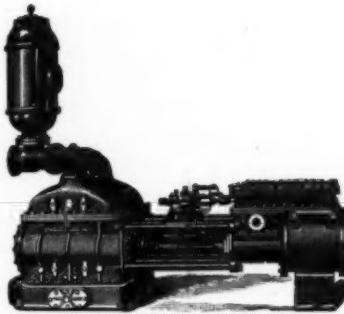


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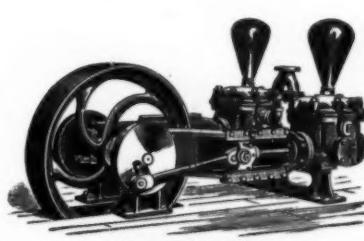


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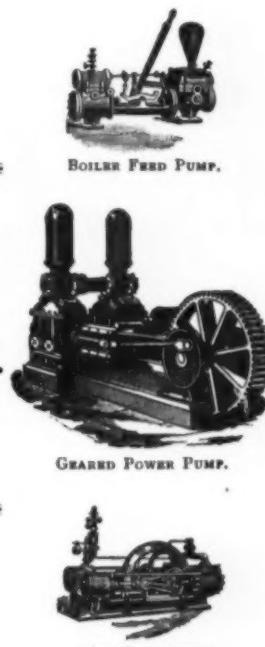
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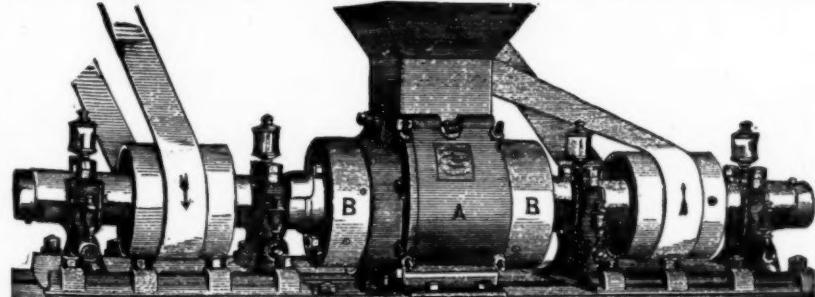
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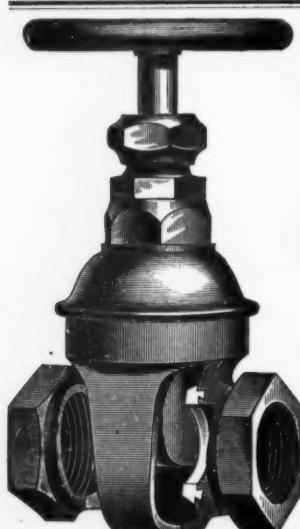
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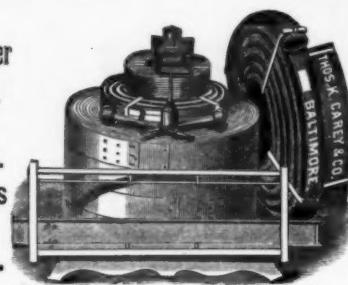
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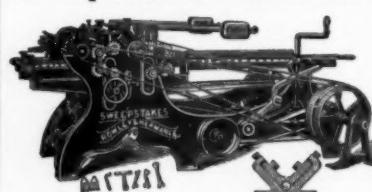
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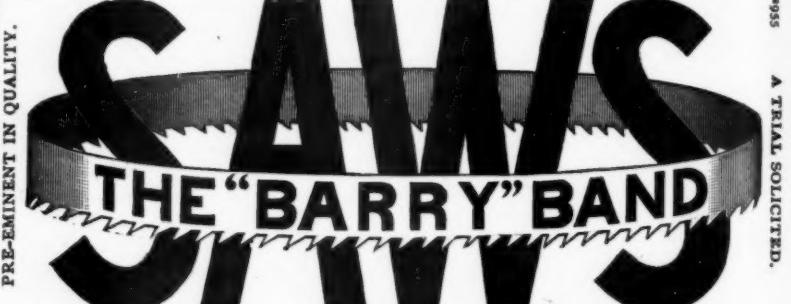
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